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# THE NEW-CHURCH REVIEW

A QUARTERLY JOURNAL OF THE CHRISTIAN THOUGHT AND LIFE SET FORTH FROM THE SCRIPTURES BY EMANUEL SWEDENBORG

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# The New-Church Review

The NEW-CHURCH REVIEW first appeared in January, 1894, succeeding the monthly *New Jerusalem Magazine* (established in 1827). The quarterly form is adapted to more elaborate articles and fuller discussion of current literature and current events. In line with its predecessor, the REVIEW aims to serve as an organ of the best thought of the New Church at large. With this aim it is to be progressive and constructive as well as retrospective and critical.

The Board of Editors consists of the Rev. Lewis F. Hite as managing editor, and of Mr. B. A. Whittemore and the Rev. William F. Wunsch; with the Rev. Messrs. James Reed and H. Clinton Hay in an advisory capacity.

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THE
# NEW-CHURCH REVIEW

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## THE STATE OF THE WORLD WHEN CHRIST CAME.

BY THE REV. LEWIS FIELD HITE.

CHRISTIANITY presupposes the historic fact that the world was lost, and had to be saved by the Divine interposition which Christ's coming effected. The New-Church doctrines contain very full expositions of how this salvation was accomplished, but they deal for the most part with the spiritual conditions involved rather than with the historical effects and evidences of these conditions. It seems therefore a task of no little importance to survey the history of the period, and point out wherein and in what respect the human race at that time could be characterized as "lost."

We are directly concerned only with the Græco-Roman world; the previous ancient civilizations and the peoples of the earth outside the circle of the civilized nations concern us only indirectly. Happily, the main features of our survey are obvious and well known.

Socrates, Plato, and Aristotle, are names familiar to us all. From high antiquity, these names have been handed down through successive generations by tradition and by written documents. The history of the transmission of the thought of these men would, in a large measure, be the history of the education and civilization of the human race. In fact, for a very long period the education of Europe

was carried on under the tutorship of the writings of Aristotle. Plato's Dialogues have been the delight, the inspiration, and the guide, of an unbroken line of students from the time he taught in the groves of the Academy to the present day. In the sacred precincts of the Academy, Plato's successors taught without a break for ten generations, down to the time of Philo and Antiochus, teachers of Cicero. About this time a crisis took place in its external history which deprived Plato's School of the revered habitation; for when the Roman conqueror, Sulla, captured Athens, he demolished the groves and buildings of the Academy, and the School was forced to seek quarters elsewhere. After this, the light of tradition is less steady, and the written documents preserved from the time are too meagre for us to trace the succession continuously; but still we can make out a long list of names, about twenty, of the successive teachers, which brings us down to the time when Justinian closed the schools of ancient philosophy, and the long line of Plato's successors came to an end. The School of the Academy was then broken up, and its members scattered, but Plato had become the heritage of mankind. During all this period of nearly a thousand years Plato's mind had been the light of the world; thirty generations of pupils from all quarters of the civilized globe had flocked to Athens to be educated in his philosophy.

Meanwhile, the greatest of all the pupils of Plato, Aristotle, had become the head of a school of his own, and the first of a long line of successors, beginning with Theophrastus and ending with Simplicius; in these successors, Aristotle side by side with Plato was the other great educator of mankind. During the whole of this one-thousand-year period Athens was a great university city. Students in large numbers flocked there from all parts of the known world. Theophrastus, the head teacher of the Peripatetic School, after Aristotle, had, we are told, two thousand students at one time. This serves to indicate how largely these schools were attended.

Alongside these two great streams of light which radiated in all directions, and formed new centers in many far distant and favored spots, two other schools with a following in the course of time still greater, contributed through more than ten generations of successive teachers to the intellectual and moral enlightenment of mankind. For while Theophrastus was teaching in the Lyceum, and when Polemo was teaching in the Academy, Zeno and Epicurus came to Athens and established the schools which ever afterwards went by the names, "Stoic" and "Epicurean." Nearly ten generations later when Cicero was at Athens as a student, he heard Antiochus, then the head teacher of the Academy, and Zeno of Sidon, the head of the Epicureans. About this time, Andronicus of Rhodes was at the head of the Peripatetic School; and Apollodorus at the head of the Stoics. During the whole extent of this eventful period, the period of Alexander the Great and the period of the Roman conquests, these four schools flourished, drawing their pupils from all quarters and sending them forth again to become leaders of thought and action. The history of these four schools is the history of the education of the peoples who inhabited the Mediterranean basin. From these schools at Athens highly trained students returned filled with the new enthusiasm for learning and teaching to their own cities and there became themselves teachers and heads of schools and leaders. Such schools served the double purpose of fitting young men for the central university at Athens and of preparing them for the business of life. Some of them grew to be famous and were important rivals of Athens herself. It was in this way that the Greeks became the teachers of the world.

But the victorious march of Greek thought and of Greek polity was made possible by the unparalleled achievements of a Greek soldier, who was himself a product of the schools at Athens, of Socrates, Plato, and Aristotle. Plato was for ten years a pupil of Socrates and the teacher of Aristotle for twenty years. Aristotle was the teacher of Alexander the Great. Thus we trace the most important

political movement of antiquity to the founders of the schools at Athens.

Within one short generation, Alexander carried the light of Greek thought and the energy of Greek life to the farthest boundaries of the old-world civilization; he built new cities and established new kingdoms; he extended the Greek empire from the valley of the Danube to the Nile and the Indus; he moulded the various peoples of this vast region into one cosmopolitan organism. Greek kings and princes were placed in every important province and in every important city. Throughout this entire realm, Greek administration directed the course of public events. Asiatic custom passed through the refining medium of Greek thought; and Greek thought and energy found new and broader fields.

As time went on, the struggle for existence and supremacy among Alexander's successors brought to the front certain powerful dynasties; the Ptolemies in Egypt, Seleucus and Antiochus in Syria, Eumanes and Attalus at Pergamos, established in their respective kingdoms strong and enduring centers of Greek influence and control. It was a period of unrest and change. Political ideas, governmental policies, civic institutions, were brought into collision, and in the collision were put to the test of experiment. The result was that time-honored customs were broken down; long-established political and social ideals were overthrown and abandoned; forms of organization and action were sought which would be better suited to the new conditions.

Along with this political unrest and change went a corresponding upheaval in the intellectual, moral, and spiritual activities of the disturbed peoples. As the religious ideas of the Greeks and the orientals mingled, their intellectual and moral standards were brought into conflict, and a far-reaching struggle for supremacy ensued. These conditions naturally found literary expression. In Alexander's train there were historians, poets, scientists, philosophers, all eager for new views and new material. Among the phil-

osophers, and characteristic of the drift of the period, was Pyrrho, whose thorough-going scepticism well expressed the uncertainty which resulted from the mingling and conflict of standards. Such a time of uncertainty, unrest, and confusion, compels, even if by way of re-action, earnest and vigorous search for the eternal truth of things. It was in meeting this demand that Plato and Aristotle, and the schools at Athens which arose after them, became the recognized sources of light and guidance. Under the tutorship of Plato and Aristotle, the Stoics built up a system of ethical and religious philosophy, of amazing and enduring proportions, which proved a powerful and effective instrument for the intellectual training and moral elevation of the age. It was at this stage that we admire perhaps most of all the inestimable rôle played by the great centers of learning and intellectual activity which sprang up in all parts of the immense territory conquered by Alexander the Great and thus brought under Greek sway.

Of the many great achievements of Alexander, none was of greater or more lasting importance than the planting of the City of Alexandria at the mouth of the Nile. Here at a point on the Mediterranean Sea where the peoples of the three continents could most conveniently meet, arose the city which was to be the cosmopolitan center of all phases of the life of the time. Here for the first time in history, the ordinary relations of men, social, political, commercial, intellectual, assumed international proportions; and cosmopolitanism found a fitting habitation. Here international commerce and universal learning were developed and maintained to an extent never before realized. Of supreme importance for a widespread civilization was its development as an educational center, a truly great world university.

One of the incidents of the struggle for supremacy among Alexander's successors was the expulsion of the accomplished and scholarly Demetrius Phalereus from Athens. Demetrius was a friend and fellow student of Theophrastus, then as successor of Aristotle the head of the Peripatetic

School. His friendship with Theophrastus and his knowledge of the schools of philosophy then in Athens, served him well when he sought safety, friendship, and opportunity with Ptolemy, one of Alexander's generals, then king of Egypt. He interested Ptolemy in the plan and work of founding a library and museum, and was eminently fitted for the task of laying the broad and true foundations of such an institution by reason of his familiarity with the models which the Academy of Plato and the Lyceum of Aristotle furnished him. The work which Ptolemy and Demetrius began was continued on a magnificent scale by several generations of the Ptolemies. Ample accommodations were afforded to students in every department of learning. The sciences, such as mathematics, mechanics, astronomy, and history, were pursued with a high degree of success. The library grew until it contained about 600,000 volumes. Alexandria became and for centuries remained the depositary of the world's learning and the distributing center of its combined enlightenment.

The example first set at Athens and afterwards shown on such a large scale at Alexandria, was followed by cities and kings far and wide. At Pergamos, the library was for some time a rival of that at Alexandria; when Mark Antony transported it to Alexandria as a gift to Cleopatra, it contained 200,000 books. At Rhodes, Tarsus, Antioch, at Kyrene, in north Africa, at Massilia, now Marseilles in France, to mention only a few, there were important and enduring seats of learning. As an instance of the diffusion of learning, the excavations at Herculaneum brought to view a private library of 1700 volumes.

In short, literature, learning, science, and philosophy, issued from Athens, that is, from Socrates, Plato, and Aristotle, in one steady unbroken ever-widening stream, until the flood of books and the army of students were such that not only royal cities but private houses had their libraries and their companies of accomplished scholars; and so, in the achievements of Aristotle and Alexander, Socrates

and Plato illuminated, transformed, and vitalized the civilization of the world.

This sketch sufficiently indicates the general fact that during the period under view there was immense progress in the ordinary conduct of life; and this progress was widely diffused. The historical processes and events here brought to view give an idea of the vast transformation that went on in the centuries that immediately preceded the advent of Christianity. There was an enormous expansion of the human mind and of human activities. Greek science and philosophy became the common possession of the educated, and permeated more or less all classes of society. At Alexandria, students of all races and tongues, representing the most diverse social, political, moral and religious ideals and habits, met in the arena of intellectual debate and social conflict. In this cosmopolitan community, the rigid types of national custom, myth, religion, and philosophy, disintegrated and then merged under the sway of the masterful creations of Greek genius. This was the first stage of Greek conquest, but a yet more important field remained to be occupied; a new world was waiting to be conquered.

The international position and character of Alexandria inevitably brought it into commercial and political relations with Rome, which had been slowly emerging from insignificance and was rapidly assuming importance of the first rank among the cities of the Mediterranean basin.

At the time of Alexander's death, Rome was engaged in the Samnite wars, the outcome of which left her the undisputed mistress of all Italy. The Ptolemies of Egypt recognized and availed themselves of the growing power and importance of the Romans by calling for their interference to check the inroads of the Syrian kings. Subsequently it became usual for the weaker powers of the East to make alliances with Rome as a protection against their more powerful neighbors. On the European side also, Rome began early to make hostile contact with Greece; and the Greek towns of southern Italy, intolerant of Roman dominion,

called Pyrrhus, the warlike king of Epirus, to their aid. The brilliant warfare of Pyrrhus, for a time, swept the Roman soldiers off the field and back upon Rome; but, far from his base of supplies and in a hostile country without adequate support from the Italian races for whom he was doing battle, he was finally compelled to withdraw and return to his own country. As time went on, the dissensions, rivalries, and conflicts of the Greek states and their Eastern principalities rendered them more and more a prey to Roman aggression. After the subjugation of Carthage, Rome gradually extended her dominions eastward until all the hellenized parts of Asia and Africa were brought under her sway. This effected the most powerful and most permanent political unification of the nations of the earth that had ever been accomplished. Later this dominion extended westward; and from Britain, Gaul, and Spain, on the Atlantic, to the far-off Caspian; from the lower Rhine and the upper Danube to the whole extent of the north African coast, the nations within these boundaries were knit in the most compact and the most widely extended political organization the world has ever seen. This vast realm it was the destiny and the task of Greek thought and Greek art to subdue, enlighten, and inspire.

By the repulse of Pyrrhus and the overthrow of Carthage, Rome acquired international importance; but her people were illiterate, rude, and uneducated except in the arts of war and government. When the soldiers of the Scipios and of Flaminius returned from the campaigns in Africa, Greece, and Asia, they and their armies brought back with them new impressions, new impulses, and much enlarged views of life. The nation secured an immensely extended horizon and began to breathe a larger intellectual atmosphere; and being without a literature and without art, first the leaders and then the people turned instinctively and inevitably to the works of the Greeks. The first writers of the Latin language were Greeks, and the first Latin books were translations from the Greek; the finest products of Roman intellectual and literary genius were imitations of

Greek models. Livius Andronicus, a Tarentine Greek, translated the Odyssey and several Greek tragedies. Plautus adapted Greek comedy. Lucretius put the philosophy of Democritus and Epicurus into Latin verse. Cicero epitomized and popularized the philosophy of the Greek schools; and the young Romans of his day topped off their education by going to Athens, or to Rhodes, or to some one or other of the great university towns, where schools on the Athens model with libraries and museums, and teachers of world-wide fame, brought to them all the treasures of Greek science and philosophy. Virgil imitated Homer, Hesiod, and Theocritus. Horace, the greatest and most original of the Roman poets, drew his inspiration and formed his ideals from the Greek of Pindar and Sappho, and assimilated the whole body of Greek literature.

When Scipio Africanus and Cato the Censor were boys, Livius Andronicus was translating Homer for the use of his pupils, and this translation became the text book in which the Roman children learned their first lessons in language, in history, and in poetry. A generation later when Scipio and Flaminius returned from Greece and Asia, Rome became flooded with Greek books, Greek teachers and specimens of Greek art.

It was in this way that the conquered Greeks soon brought the strong and haughty Romans under the sway of Plato, Aristotle, Zeno, and Epicurus. When Nero, the third in succession from Augustus Cæsar, mounted the Imperial Throne, his most influential and trusted advisor was the tutor of his youth, Seneca, who was thoroughly imbued with Greek learning and Greek culture. Among the eminent Greek philosophers who were teachers at Rome, we find also Panætius, the friend of Scipio and Lælius; Plutarch, tutor of Hadrian; the great Plotinus, friend and preceptor of Emperor and Empress Gallienus and Salonina; finally in the person of Marcus Aurelius, Greek philosophy mounted the throne of the Roman Empire.

This rapid survey shows how completely Greek education pervaded all departments of Roman life. The passing

of the Greek spirit and Greek culture over to the Romans was one of the momentous facts of human history and progress. It secured the conservation of matchless human achievement and the continuity of human development at its highest level; and it ushered in a new movement which was destined to absorb and to direct all the higher energies of the race.

About 300 years after the reign of Augustus and 144 years after Marcus Aurelius stood for Stoic philosophy on the Roman throne, the Emperor Constantine professed the Christian religion and made it the state religion of the empire. It is hard for us, now, to realize the suddenness with which this event came upon the Roman world. It is true that the Christians had been known to official circles and otherwise for two centuries or more as a troublesome and mysterious religious sect, and had at times been subject to rigorous persecution, but their religion was practically unknown; the official and public life of the Roman people was completely under the sway of the traditional and national cults. What then was the meaning of the sudden appearance of this new religion of imperial sanction and authority?

Three centuries and a quarter before the time of Constantine, there lived in the remote and obscure province of Judea a man known as Jesus Christ. His life was so quiet and unobtrusive that current histories of the time made bare mention of him, and He would have escaped official recognition but for the fact that He was brought before Pontius Pilate, the Roman governor, on the charge of sedition and by him turned over to the Jews to be crucified. From the Roman point of view there was nothing in this event, nothing in the life of this man, that was of the least public importance; and yet in the course of three centuries his followers and his religion took possession of the empire.

Even from the point of view of his own small community, He was merely a mild, though extravagant imposter, yet the Jewish nation and Jewish ecclesiasticism crumbled

under the forward sweep of his regenerating power. What was the secret of this power?

He made, no doubt, extraordinary claims; above all the claim to be not only the Son of God, but to be God Himself.

In the light of a long history, and in the faith which we inherit, we accept this claim, at least to the extent of saying, He was the Divine Man, the personal manifestation of the power, wisdom, and goodness of God. Even so, but we wish to know wherein did He exercise and exhibit this Divine nature? We wish to see in history the fact of his Divine presence and operation.

We need to take ourselves back to the state of the world which the Lord actually dealt with and view Him in relation to the world which knew Him and felt the power which went from Him. From this external point of view, the story of his life can be told in three short sentences. He was a wandering teacher, who attracted a few disciples and interested a number of simple, ignorant people in the country and towns about the river Jordan; He did miracles; He yielded Himself up to death on the cross. Now this story, though remarkable and in some respects extraordinary, is by no means in its general features unparalleled. Socrates taught freely in public places and in the end yielded himself up to death in calm and deliberate allegiance to his principles. Apollonius of Tyana, as well as the great and good Plotinus, did, or at least was reported to have done, miracles. No, we cannot get the full secret of this life from the outside. Doubtless the miracles and his death helped to strengthen the impression He made upon the minds and hearts of men, but they were obviously ephemeral and external in their effects. The secret of his power must be found in the character of his personality as revealed in his life and teaching, but especially in the course of history. His continued presence operating in the thoughts and lives of men,—this alone suffices to explain the facts of history.

The essential and outstanding feature of his teaching was that He was the Messiah and that his mission was to save the world. In the light of our historical survey the

implication herein contained that the world at that time was lost, or on the verge of ruin, is startling, and challenges our curiosity and our dogma. Our task therefore is to discover wherein the world was lost, and how the Lord's coming averted the catastrophe.

The brief survey we have taken of the march of Greek civilization and of its incorporation in Roman life, especially the literary, social, and political splendor of Rome in the time of Augustus Cæsar, gives a strange irrelevancy to the assertion that mankind was then threatened with impending ruin. On the other hand, it seems certain that the quiet life and simple impress of this obscure Galilean did actually constitute a new upward movement in the history of the race. The striking contrast here presented between the splendor of the Roman empire and the obscurity of the Lord's work is an eloquent comment on the instability of worldly greatness, and invites us to undertake the task of developing the two aspects of the situation. This involves bringing into comparison the essential features of Greek philosophy and the distinctive elements of the Christian religion. It amounts to a search for what was lacking in Greek philosophy and what it was that men needed to restore or to secure to their souls the peace and happiness they strove for. Then it may appear how Christianity supplied that need and why it was that in the course of three centuries the Roman world became Christian.

The wide extension of Greek civilization and its incorporation in the Roman empire gave to the reign of Augustus a momentous importance in the history of human development. All the nations of the Mediterranean basin were united by the strong bonds of Roman law; and on the basis of Roman civilization stimulating and profitable commercial, social, and intellectual relations were established and maintained throughout the length and breadth of the vast domain. Athens, Jerusalem, Babylon, Alexandria, Byzantium, Massilia, Valencia, London, were all neighbors by virtue of their connection with Rome. A profound peace reigned upon the earth. Knowledge of the

world, the comforts of life, and protection to person and property, had never been so universal. Education, learning, philosophy, religious freedom and moral enlightenment were never so widely diffused nor more freely enjoyed. The one loss which was most seriously and generally felt was the loss of national independence, and the stimulating force of national spirit; but this was compensated for by the enlargement of personal relations and of intellectual horizon. Petty nationalities were absorbed in the one great cosmopolitan life. In view of this condition, where are we to look for those characters of decay, dissolution, and despair, which the advent of the Messiah proclaimed? It is true that the Jewish Church as well as Jewish nationality had given way under the pressure of worldly influences, and was deeply sunken in internal corruption. On the other hand, the Jewish Scriptures, especially the ethical and intellectual elements of the Jewish religion, had been brought into the currents of international life and made permanent constituents of civilization by the Septuagint translation, and by the work of the Jewish Alexandrians headed by Philo. It is indeed true that tendencies and vices had been developing in the higher life of the Romans that presaged the collapse of Roman civilization. But after all the downfall of Rome was the rise of the German and Romance nations. It is moreover easy to magnify the importance of the dissolute life of a few Roman nobles and their political representatives, and overlook the fact that the great body of citizens throughout the empire were enjoying a substantial degree of independent development, and were cultivating the virtues of a larger citizenship and a more comprehensive morality. It seems, therefore, that a broad survey of the period fails to detect any of the evidences of decay which we are disposed to presume. If then we are to verify the predictions which heralded the coming of the Messiah, we must fix our attention upon the immediate period of the Advent and try to discover in it and in the conditions that led to it the situation that will meet our requirements. Unfortunately, for our purpose, there are

no proper literary representatives of this period. We must therefore rely on more or less remote sources. Of these, Cicero and Lucretius represent the previous generation; Philo and Seneca the generation following. Horace, also, though belonging a little earlier, comes very near our exact period, and gives us valuable pictures of the social and private life of the time. These writers make it clear that the ethical precepts and religious ideas of Plato and Aristotle were public property at this time. Cicero's book on the Nature of the Gods, and his essays on various moral questions, are good examples of the way in which the thoughts of the Athenian philosophers were incorporated in the life of the age. If then we summarize the teachings of Plato and Aristotle, we will have before us the dominant principles of the moral and intellectual life of the time when the Lord the Saviour appeared upon the earth.

According to Plato, the highest quality of human life is justice; and this is completely expressed only in a perfect social order, as for example, in the ideal state. The City of God as St. Augustine describes it, or the Heaven of Angels made known to us by Swedenborg, are types of this order. Public service is the proper field of virtuous conduct. The pursuit of Divine Truth and fidelity to it constitute the essence of the Wise Man. The moral and spiritual good of others is the highest aim of man's public and private life. Obedience to the constituted authorities and to the Divine Commands is the law of right conduct. Life here and now is a preparation for the life to come. The life of the soul is in constant warfare with the life of the body. Death is but a release of the soul from the body. Only the death of the soul, moral and spiritual death, is to be feared. It is worse to give an injury than to receive one. The bad cannot really hurt the good. Aristotle developed these doctrines with still further precision. He conceived God as the Divine Wisdom, the one only absolutely Self-conscious Life; and this was also the Divine Good. Human perfection is attained by approximation to the Divine Life.

The above views and principles were expounded by successive generations of teachers and pupils; and in particular they were worked into the Stoic system of philosophy and morals. In this way, they became active and all-pervading constituents of the intellectual and spiritual life of the time, and of subsequent ages as well.

When we turn now to the story of the Gospels, we feel that any mere summary would be distressingly inadequate. And yet when we read the simple record of the life and teachings of the Lord, we are struck with the meagerness of the story. Apart from certain outstanding facts,—the supernatural birth, the working of miracles, the claim of Divine nature, and the singularly impressive scenes at the close,—we have indeed the series of discourses, among them the parables, the Sermon on the Mount, the Lord's prayer, together with some more specific teachings such as the new birth, the spiritual quality of little children, and above all, life in the Lord and from the Lord through obedience and by means of love to one another. In fact, we can sum up the lesson of the entire Gospel in the one sentence, look to the Lord and do good. It is true, the Lord says "A new commandment I give unto you that ye have love one to another." The commandment, however, is new in emphasis and in interpretation rather than in statement. Aristotle devoted two books of his "Ethics" to love; and Plato occupies three whole dialogues and considerable portions of others with the doctrine of love. We must add that Plato's conception and treatment of justice really exhibits the practical and social aspects of love. As a mere system of ethics then it would be hard to vindicate any clear superiority of the Gospels over the teachings of the Greek philosophers. It is not so much in the fact that the Lord's words were new to the world of his day in principle and in substance, that we must look for the distinctive character of his mission and work. The world which He was to save has not yet been brought adequately to view. While it would be idle and misleading to attempt to describe in the usual mythological terms the events and conditions which

preceded and accompanied the Lord's advent, nevertheless these spiritual conditions were the real factors in the situation. But it is of prime importance to appreciate the fact that being real these spiritual conditions must have found expression in the actual lives of the men of the time.

So far we have seen no imminent peril; on the contrary, we seem to have been tracing only stages and varieties of progress. Our search for the lost world seems, like the "Quest of Love" in Sidney Lanier's poem, to end in increased light and life. We shall have to look deeper, and penetrate to the inner motives, the inner conflicts, the inner struggles for light and peace, which were peculiar to the spiritual life of the age. This is a complicated and tragic story, and its adequate recital belongs elsewhere. Nevertheless, there is one character, one capital feature, which marked the life of the Alexandrian and Roman periods as unique. We cannot pause to give the complete spiritual setting of this feature, but we may observe quite directly and simply that one inevitable consequence of the wholesale destruction of nationalities and the vast commingling of ideals and customs was the loss of clear and positive personal convictions. Local and national cults either disappeared entirely or became powerless to command allegiance and mould character. Religious professions and practices came to be matters of indifference or of chance. In view of the variety and conflict of claims, an easy-going eclecticism supervened, and the average man was left without an authoritative creed, without Divinely sanctioned modes of worship, and without fixed religious convictions.

In spite of the marvellous developments and progress of Greek science and philosophy, and in spite of the universal extension of knowledge and enlightenment, the mind of man discovered more problems than it solved. Men turned to the authority of Divine inspiration and the sacred books of the past; but here, again, conflicts, inconsistencies, and doubts met them. The searching criticism of the Skeptics and the bold materialism and agnosticism of the Epicureans still further darkened the situation and

added to the despair which followed failure. With no criterion of truth, with no positive and settled convictions, the inner life of men was aimless, hopeless, and cheerless.

The personality of Socrates had made a powerful and permanent impression upon his own and subsequent generations. Under the impetus of this impression and with the type which Plato's genius moulded therefrom, the philosophy of after ages through many adversities finally concentrated supremely and almost solely upon the task of conceiving and setting forth the full and complete life of the Wise Man. The Stoic philosophy, especially, made this its task and nobly did it strive to accomplish it; but only to find, after exploring the nature of man and of man's relation to the world, that sufficient knowledge of human nature, of the world, and of the proper ends of man's life, was beyond its reach. The struggle, in which vast fields of speculation and science were developed and interrogated, left mankind without answer to those questions which the head and the heart most vehemently ask; what is truth? what should we aim at? what is the perfect conduct of life and what is the perfect type of manhood?

Philosophy failed to meet the demands and needs of the time; it aimed to serve as a substitute for religion, but only succeeded in making the loss of religion even more unbearable. The failure of philosophy and the loss of religion were peculiarly disastrous to the personal life because of the deepened sense of the inadequacy of human knowledge and human reason. Evidently we have here one aspect of the world of the pre-Christian centuries and of the time of the advent, that does most positively and plainly show despair and dissolution. The inner personal life of men, the souls of men must be renewed, enlightened, uplifted, or civilization built upon Greek genius and Roman energy would crumble to ruin.

Whatever theory or doctrine we may hold as to the nature of Christ, it is plain and simple historic fact that He did bring to men new light, new strength, and new hope; and He did this in part at least by presenting in his own person

the ideal which the philosophers vainly endeavored to create. Through this ideal He worked in spirit and in truth even after He disappeared from among men. He not only presented the ideal of the Wise Man which the philosophers vainly sought, but He fulfilled it, filled it with his own presence and power.

When we try to analyse the Lord's personality and his life as revealed in the simple Gospel story, and to pick out those features which were unique and effective, we are strangely at loss to name the words, the acts, or the characters, that stamp Him as distinctly pre-eminent. It was not so much the truths He uttered as the fact that He spoke them; it was not so much the deeds He did as the fact that it was He who did them; it was not so much the qualities He possessed as the fact that He possessed them, that made what He said, what He did, and what He seemed, so immeasurably potent. We may of course take all this as evidence of his Divinity, but the word Divine neither adds to nor takes from what He actually was or did. It explains nothing. It was He Himself who gave the word Divine its Christian meaning, although men have been slow to abandon the pagan conceptions which prepossessed their minds. All we can say in the light of the facts is that the Lord's person was to the men of his day, and thenceforward, the Truth, the Life, the Perfect Man. We have of course in the New Church an immense amount of illuminating doctrine, we have the doctrine of Man, and the doctrine of Love; in the light of this doctrine we are able to see and to say many things of transcendent importance; the glorification and its human analogue regeneration take on immensely deeper and finer characters. The historic Christ is not the whole Christ; for even then He was the living Christ, the Christ that informed and infilled men with His spirit. There was a unique power in His person; it held together the most diverse people, parties, opinions, philosophies, rites, and stamped them all as Christian. He Himself became the criterion of truth, and the ideal Wise Man. Faith in Him brought as an actual experience inner

light, and strength and peace. No doubt faith in Socrates would have brought something of the same, but as a matter of fact Socrates did not save the world. The person of the Lord Jesus did save the world, transformed Roman civilization, and brought into existence the Christian Church, where at last men found spiritual rest, spiritual freedom, and inward peace.

LEWIS F. HITE.

# THE UNITY OF ISAIAH.

By the Rev. John Whitehead.

THE method of the Higher Criticism is to analyze the contents of the books of the Bible, and therefrom draw conclusions concerning the sources of the materials therein contained and the authorship of the books. This method is now carried to such extremes that the various books of the Bible are dissected into many parts, to which many different authors are assigned. The conclusions thus reached reduce the books to a species of mosaic, a patchwork of incongruous parts having no essential unity, no coherent and comprehensive design and intent as a whole. When viewed only externally as to its human authorship and origin, this destroys all faith and belief in the Bible as Divine revelation. Where the belief still lingers of the Bible as revelation, it is said that there is a revelation within the Bible, meaning that there are within it high, noble and pure sentiments and truths which were inspired into the writers; but it is not believed that the books in their entirety were revealed and dictated by God. The tendency of the Higher Criticism is to destroy the old belief in the Bible as a Divine revelation.

Without going into the broader question of the Bible as a whole as a Divine revelation, or rather the Sacred Scriptures containing the internal sense as a Divine revelation, I wish to confine our inquiry today to the *Book of Isaiah,* and to consider the question of its unity and purpose, to see whether there are reasons for accepting its unity of construction and purpose, offsetting the reasons advanced in favor of a variety of authorship spread over four centuries of time.

Without entering into a minute analysis of the positions of the Higher Criticism, let us take the conclusions reached

by Rev. T. K. Cheyne in the Polychrome Edition of the Prophet Isaiah. In brief he says there was a First *Isaiah;* a Second *Isaiah;* later editors who altered or added passages; a First *Narrative;* a Second *Narrative;* Prophetic or Poetic Passages, and other additions.

The book is divided into two parts. Chapters 1-39, constituting the first part, were only in part the work of Isaiah. Isaiah wrote his prophecies B. C. 734-701. But Cheyne says the First Part of Isaiah was not completed until about B. C. 400, three hundred years after the time Isaiah lived. He says:

> It was a practice of the later editors to ensure the preservation of anonymous prophecies by inserting them in the acknowledged works of well-known prophetic writers. . . . The fame of Isaiah as a prophet was so great that it was only natural that he should be chosen as a kind of patron for unclaimed prophetic writings, and the whole conception of prophecy had become so largely modified in the post-Exilic period . . . that a book which was only in part Isaiah's would soon be unhesitatingly referred to his authorship altogether. (P. 129.)

According to this theory, into the framework of Isaiah 1-39 which Isaiah wrote, a number of compositions were inserted at a later date; as, for instance, the prophecies over Edom, Kedar, Moab and Egypt. Cheyne further says:

> The second half of Isaiah like the first is of composite origin. No part of it belongs to Isaiah. The Original Prophecies of the Second Isaiah include chaps. 40-48. The other parts were written from B. C. 549-347. The various colors in which the text is printed indicate the various authorship.

The arguments against the authorship by Isaiah are based on (1) the differences of style, (2) the mention of Cyrus (B. C. 558-529) in Chapters 44, 45, who is called Jhvh's Anointed; (3) the mention of the Servant of Jhvh, who is to restore the world; (4) the prophecies of restoration; (5) new theological ideas not known by Isaiah. Cheyne says:

> The latest prophecy appears to be 63:7—64:12, which reflects the despondency of the darkest period in Jewish history between

Ezra's Reform (432) and the Maccabean rising (167)—the period of the barbarities of Artaxerxes Ochus (about 347). There is nothing later than this in cc. 40-66, nothing, therefore, to place beside parts of cc. 25-27 (date perhaps 332) and the epilogue of c. 19 (date perhaps 275). It only remains to be added that the latest editor gave a semblance of unity to the scattered prophecies which he had before him, by dividing the entire mass into three nearly equal books, the two former of which close with nearly the same words (48:22; 57:21). (P. 131, English Edition.)

According to the editor of the Polychrome Bible, there is no real unity in the book, but only a semblance of it from its being finally divided into three parts having a somewhat similar ending. This writer says that the styles of the writers are not similar; the period of time occupied in the writing ranged from B. C. 734 to 275, a period of 450 years. The Book of Isaiah was therefore an accretion, not a unified product. The principal factors in making these conclusions are the mention of the Fall of Babylon, the mention of Cyrus by name, and the seeming references to conditions existing only after the Exile.

It is well for us to keep these reasons in mind in considering the nature of the Book of Isaiah. It is, of course, as possible for the book as a whole to be inspired and have a continuous internal sense though written through several inspired penmen, as it is for the various books of the Sacred Scriptures to have a continuous internal sense from beginning to end, although written by many writers. But before accepting the conclusions of the critics, we should first of all consider whether their positions are warranted in view of the principles given to us in the Writings of the New Church.

The critics seem to believe that prophecy is not possible. Any prophetic utterance such as annunciation of the Fall of Babylon, or the mention of Cyrus, they assume was written after the event took place. In this they are not only in opposition to our Lord, who mentions various prophecies as applicable to Himself and to John the Baptist, but they are in opposition to numerous psychical experiences outside the Scriptures in which coming events have

been foreshadowed. The belief in the gift of prophecy is inseparable from the belief in the Scriptures as Divine revelation.

Swedenborg in his "Adversaria" says of Koresh or Cyrus, mentioned in Isaiah xlv, 1:

> Koresh is Cyrus, of whom we read in Ezra, that he ordered Jerusalem to be built with the temple; which was predicted long before he was born, as is sufficiently evident from the very words. Thence now are the prophetic things concerning those who are mentioned in this chapter. For the prophetic spirit seizes those things which are present and predicts concerning God Messiah, His Kingdom, the Church, etc., as you may see everywhere; as when it treats of Babel, Ashur, and others. Then in the prophetic sense by them for the most part are meant the enemies of the church; but these things are confirmed from all those things which are extant in the prophetic writings. Then rarely if ever is that person, that region, or that city meant that is named. In this what is prophetic differs from what is historic. (Adv., IV, pp. 114-115.)

The distinction is here drawn between prophetic and historic writings. The prophetic writing, while using names of places, countries, cities or persons, is simply using those names as prefiguring and representing states of the church. The historic development afterward may coincide to a certain extent with the prophecy, as in the prophecy of the Fall of Babylon, or in the coming of Cyrus; but at times the prophecy has no material fulfillment, as in the glorious predictions of the magnificence of Zion and Jerusalem, and the reign of the Messiah in it. The fact that the book is prophetic takes it out of the conditions of the historic series of events, and raises it into the series of spiritual events. This is clearly seen in the prophecies of the Second Coming, the natural events seemingly predicted being solely applicable to the spiritual conditions of the church, and not to the wars, pestilences, famines, and earthquakes of history.

With these preliminary remarks let us turn to the Book of Isaiah to see if we can discover a unity within the apparent diversity, a harmony of parts throughout pointing

to a unity of authorship. In the first place the cleavage noted by the critics is apparent on the face. The Book has two distinct divisions, two halves. Chapters 1-39 called by the critics the *First Isaiah* embraces the first part. This may be compared with "Paradise Lost," for it begins with a terrible indictment of Israel for its sins; then through varying phases of the exposure of the prevailing evils, it leads to the final and inevitable result, the captivity of Israel to Assyria, and of Judah to Babylon. The first part closes, not with a description of the actual carrying away into Babylon, as does the Second Book of Kings, but with a *prophecy by Isaiah to Hezekiah* in which he said:

"Behold the days come, that all that is in thine house, and that which thy fathers have laid up in store until this day, shall be carried to Babylon; nothing shall be left saith the Lord" (xxxix, 6).

It is to be noted that the critics say that these references to Babylon were inserted long afterward; they were not written by Isaiah. Chapters 34-35, and 36-39, it is said, constitute a double appendix, written in post-Exilic times.

Yet if we examine the series, chapters 1-39, we can readily see that it is a unit which involves unity of plan and purpose; namely, the purpose of revealing and exposing the evils of the Jewish Church, and of showing the causes of its decline and fall, even to its final end in Babylonish captivity. The sins exposed in the first chapter involve the consummation depicted in the thirty-ninth chapter. All the intermediate chapters are intimately related with the beginning and the ending. There is nothing in the series from the sins of Judah to the visit of the ambassadors of Babylon to Hezekiah which Isaiah was not perfectly familiar with. Why then could not he describe them from historic knowledge, and moved by the prophetic spirit warn Hezekiah of the consequences of his deeds and of the sins of Judah and Israel?

We have now to examine the intermediate chapters between one and thirty-nine. You will note that in the Poly-

chrome Bible there are various colors indicating a varied authorship. The black is the foundation narrative written by Isaiah. This is but a small part of the whole. Quite a number of parts are printed in light blue to indicate additions by later editors. The very first verse is printed in light blue as a later addition. By examining these passages we find a large number of them are ascriptions of the prophecy to the Lord,—"The Vision of Isaiah," "The Burden of Babylon," etc. The fact that the message is represented as coming from the Lord seems to be sufficient reason for critics to take it out of the mouth of Isaiah and make it an editorial addition. The book is thereby deprived of its prophetic character. It is reduced from the degree and rank of Divine inspiration, and is degraded into a mere aggregation of anonymous pieces of literature.

Isaiah, however, begins by showing his credentials as a prophet of the Lord: *"The Vision* of Isaiah the son of Amoz *which he saw* concerning Judah and Jerusalem in the days of Uzziah, Jotham, Ahaz and Hezekiah, kings of Judah."

This affirmation of his seership he repeats again and again: *"The Word that Isaiah* the son of Amoz *saw concerning Judah and Jerusalem"* (*ii,* 1). He speaks in the name of the Lord: "The Lord saith"; "Thus saith the Lord"; "In the year that King Uzziah died, *I saw also the Lord sitting upon a throne high and lifted up and His train filled the temple"* (vi, 1); "The burden or prophecy of Babylon," "of Moab," "of Egypt," etc. These sufficiently repeat the claim of a Divine message uttered through the prophet. Is it not logical for Isaiah to put this claim at the head of the message? Isaiah did so. The critics would *denature* it by relegating these claims of Divine inspiration to the fraudulent entries of posthumous and unknown editors.

This claim, that the early scribes took such free liberties with the sacred manuscripts, has no support from documentary evidence. Swedenborg testifies to the Divine Providence operating to prevent the Word from being

mutilated. In the "Doctrine concerning the Sacred Scripture," n. 13, it is said:

> Be it known that in the spiritual sense all things hang together in a continuous connection, which is fitted together in such a manner by the force and meaning of all the words in the literal or natural sense, that if even a little word were taken out of it, the connection would be broken and the coherence would perish. In order to prevent this, it is added at the end of this prophetical book that not a word shall be taken away (Rev. xxii, 19). It is the same with the books of the prophets of the Old Testament: in order to prevent anything from being taken away from them, it came to pass of the Lord's Divine Providence that everything therein down to the very letters were counted. This was done by the Masorites. (See also De Verbo, n. 4, Last Judgment, n. 41, and Divine Providence, n. 260.)

In the "Last Judgment," n. 41, it is said:

> Hence it is that, of the Lord's Divine Providence, those books have been preserved entire as to an iota since the time in which they were written, and by the care of many who have enumerated their minutest particulars; this was provided by the Lord on account of the sanctity which is within each iota, letter, word, and thing they contain.

Not only have the books been thus preserved as to their minute particulars, but we are also taught that the very order of the words and the series in the internal sense contain Divine arcana of heaven and the church. To change the order, to omit, or to add, would interrupt the series and destroy the internal sense. Of these principles the critics know nothing. That they violate these principles constantly is evident to all who read their books. Cheyne freely alters the text on account of grammar, idiom, rhythm, and metre. Thus he says:

"Among the grounds of alterations, those which have regard to metre and rhythm can no longer be neglected, especially in view of the present stage of cuneiform research" (Heb. Edition, p. 78).

The notes abound in these emendations. One of the efforts of the critics is to supply apparent defects, omissions, and errors. Swedenborg however shows that the

literal sense, especially in the Prophets, is often interrupted, and in places has scarcely an intelligible natural sense. This is from design, being so written especially for the sake of the internal sense, which even in these places flows in a most beautiful series and order, a series which would be injured by any alteration of the literal sense.

The first thing therefore for us to do is to see the series as it stands in Isaiah, and observe the series of the internal sense, that we may know and perceive the perfection of the letter.

We have already remarked that the chapters 1-39 in general treat of the degenerate Jewish Church, fallen through disobedience, corrupt through wrong living. This condition is unfolded more and more fully. It is to be noted that the degeneracy was ultimated in the later period of the Kings, the four distinctly mentioned being Uzziah, Jotham, Ahaz and Hezekiah, Kings of Judah. Three of them were good, but Ahaz was wicked. It is describing a down grade of the church, having some remnants of good, but good which only retards but does not prevent the consummation. So the Prophet does not condemn without reservation. There are remains of good to be preserved. The problem of the Prophet as viewed from the side of the letter is to expose the evil, that through repentance the good may be preserved. The corresponding work on the spiritual side is to rescue the remains of good in a degenerate church from the accumulation of evils therein. The one is parallel with the other. The letter was constructed to express the spiritual intent and work, which is to re-establish the church which has become degenerate. The real test as to the unity of the Book of Isaiah is whether it perfectly fulfills and expresses the mission and work of the Savior. The name Isaiah means "Jehovah saves." This book is especially the book of the Word which predicts the Savior's work and mission in the world. He came to separate the good from the evil, and of the good He founded and formed a New Church. This work was Divinely revealed by the Lord Himself through the Prophet Isaiah.

Universal condemnation will not save. It sweeps out and destroys the good with the evil. But on the other hand non-condemnation of the evil allows it to grow and increase like a corroding cancer until everything is destroyed. The Lord's Divine method of salvation is clearly revealed in the series of this Prophet. He comes to effect a judgment. He exposes the evil to view, and handles it with firmness and severity. This appears not only in the first chapter, but throughout the first part. But interspersed through this part are a number of prophecies; promises of restoration; prophecies concerning the Savior, the Messiah; prophecies concerning His Mission and Work. These are for the sake of the good, to sustain their heart with hope and expectation, to enable them to persevere through evil conditions, and to have that expectation as a groundwork for the reception of Him when He comes. These prophecies stand forth like gems, precious stones in the setting of the sombre arraignment of the wicked. They are an essential of the Savior's work. The book was constructed especially to carry these precious messages of hope on which the salvation of the world depended.

After the severe condemnations in the first chapter, Isaiah again saw into the future:

> And it shall come to pass in the last days that the mountain of the Lord's house shall be established in the top of the mountains, and shall be exalted above the hills; and all nations shall flow unto it. (ii, 2.)

Then again the evil comes into view. The captains, princes, judges and rulers, are flayed for their oppression of the people. The frivolity, luxury and pride of their wives and daughters are openly condemned. Then again comes the promise:

> In that day shall the branch of the Lord be beautiful and glorious, and the fruit of the earth shall be excellent and comely for them that are escaped of Israel. (iv, 2.)

So we might array the beautiful and glorious promises

in contrast with the terrible arraignments,—such promises as the coming of the Savior:

> Behold a virgin shall conceive and bear a son, and shall call his name Emmanuel. (vii, 14.)

> For unto us a child is born, unto us a son is given; and the government shall be upon his shoulder: and his name shall be called Wonderful, Counsellor, the Mighty God, the Everlasting Father, the Prince of Peace. (ix, 6.)

What do the critics say about these remarkable predictions, openly promising the Savior and telling of the salvation which he will bring?

These they say are not from the pen of the First Isaiah. They were written long afterwards in post-Exilic times by anonymous prophets. These poems according to a habit of the times, so the critics say, were inserted into the writings of the First Isaiah, and soon the people believed Isaiah wrote them. There is no documentary proof of this. It is merely the deduction of the critic.

It would be interesting to pursue the ramification of this subject in more minute detail, but we must content ourselves with calling attention to the remarkable alternation throughout this part, revealing the various phases of the degenerate church under the types of Israel, Judah, Assyria, Babel, Duma, Moab, Egypt and Ethiopia. Then the promised restoration.

The chapters 1-39 are a wonderfully and closely linked series involving judgment of the church on account of its evils, and then restoration to those who repent. The First Series in its general subject may be called *Paradise Lost,* or the Church degenerate and departed from the Lord. But the Lord does not leave His church in this condition. He promises restoration.

What can we say of the Second Part, chapters 40-66? According to the critics this was written long after the death of Isaiah, part of it by a Second Isaiah, other parts by other anonymous poets, and still other parts inserted by anonymous editors. An examination of the series shows

that this part of Isaiah is *par excellence the prophecy of restoration, Paradise Regained.* The first part was descriptive of the Fall, the descending series, the evil conditions exposed, the judgment certain to come on account of evil. The gloom of the narrative was relieved by golden threads of the promised Messiah; but it ended finally in the prediction of Babylonish captivity. The second part still has its tone of gloom, but now it is subordinate. The golden beams of a new morning bring promise of a new day. Let us remember both parts are prophecy, not fulfillment. Now in vision the Savior comes; His mission is manifested; His work is shown. The series from beginning to end is a manifest description of the Savior and His work of Redemption. Israel, Judah and Jerusalem, are the church to be restored. The application to the Israelitish nation is slight, for the ten tribes never were restored to the land of Canaan; nor was Jerusalem and Zion ever restored to that pinnacle of glory described in these glowing prophecies. To see the truth and unity of Isaiah we must see that the book from beginning to end is a prophecy of the Messiah and His spiritual kingdom, not a book descriptive of the political future of the Israelitish race.

As a prophecy of the Church restored, Isaiah, chapter 40, opens with those magnificent words of comfort and promise:

> Comfort ye, comfort ye my people, saith your God:
> Speak ye comfortably to Jerusalem, and cry unto her,
> That her warfare is accomplished, that her iniquity is pardoned.
> For she hath received of the Lord's hand double for all her sins. (xl, 1, 2.)

Then as if to cut off any misapplication and to show that it applies to the Lord's mission, it describes first John the Baptist's preparatory work:—

> The voice of him that crieth in the wilderness,
> Prepare ye the way of the Lord,
> Make straight in the desert a highway for our God.
> Every valley shall be exalted,
> And every mountain and hill shall be made low:

And the crooked shall be made straight,
And the rough places plain:
And the glory of the Lord shall be revealed,
And all flesh shall see it together,
For the mouth of the Lord hath spoken it. (xl, 3-5.)

Then comes the appeal to the Church to receive its God:—

O Zion, that bringest good tidings, get thee up into the high mountain.
O Jerusalem, that bringest good tidings, lift up thy voice with strength.
Lift it up, be not afraid;
Say unto the cities of Judah, Behold your God.
Behold, the Lord God will come with strength,
And His arm shall rule for Him. (xl, 9, 10.)

That it is the Lord God and not a merely human Messiah that comes is plain, for a description of God follows:

Who hath measured the waters in the hollow of His hand,
And meted out heaven with the span,
And comprehended the dust of the earth in a measure,
And weighed the mountains in scales and the hills in a balance. . . .
To whom then will ye liken God? (xl, 9-12, 18.)

From this magnificent opening, a grand symphony of the Messiah follows. We can only glance at the salient features.

The Messiah, the Savior, is visioned as coming to save and redeem, to rebuild and restore. "He will make the wilderness a pool of water and the dry land springs of water." (xli., 18.)

The Messiah is next revealed, not as an autocrat, but as a Servant. The Human which He assumed is clearly described in a series of chapters as the Servant of Jehovah.

Behold my Servant, whom I uphold,
Mine elect, in whom my soul delighteth;
I have put my spirit upon Him:
He shall bring forth judgment to the gentiles. (xlii, 1.)

Who is blind but my servant?
Or deaf as my Messenger that I sent?
Who is blind as He that is perfect, and blind as the Lord's servant?
(xlii, 19.)

Then the servant seems to blend with God:

Thus saith the Lord the King of Israel,
And His Redeemer the Lord of Hosts;
I am the First, and I am the Last;
And beside me there is no God. (xliv, 6.)

Then He calls Cyrus to be His shepherd. This teaching that the Messiah is the Lord the Redeemer and Savior recurs again and again through the entire series. The Lord's state of humiliation in temptation is also revealed:

He is despised and rejected of men;
A man of sorrows, and acquainted with grief;
And we hid as it were our faces from Him;
He was despised, and we esteemed Him not. (liii, 3.)

So this wonderful description proceeds through the whole chapter. Again:—

Arise, shine, for thy light is come,
And the glory of the Lord is risen upon thee. (lx, 1.)

Then again the Human is described:

The Spirit of the Lord God is upon me:
Because He hath anointed me to preach good tidings to the meek
(lxi, 1.)

Who is this that cometh from Edom,
With dyed garments from Bozrah?
This that is glorious in His apparel,
Traveling in the greatness of His strength?
I that speak in righteousness, mighty to save. (lxiii, 1.)

These are but a few of the things descriptive of the coming of the Lord.

Throughout this part of Isaiah we see a progressive unfoldment and revelation of the Lord coming in His Human to re-establish the Church. In like manner there is a progressive unfoldment of the Church and its establishment,

magnificent passages appealing to the church to abandon its evils. The Lord comes to fight for it, and restore it, culminating at length in the final word:

For as the new heavens and the new earth which I will make,
Shall remain before me, saith the Lord,
So shall your seed and your name remain.
And it shall come to pass that from one new moon to another,
And from one Sabbath to another,
Shall all flesh come to worship before me, saith the Lord.
(lxvi, 22.)

Throughout the two parts of Isaiah the golden thread of the promise of the Messiah, and the description of his spiritual work of establishing the Church, is clear and unbroken. The evils destructive of the Church are clearly revealed in both parts; the restoration of the Church follows a logical order and series. The final triumph and restoration crowns the whole book, manifesting a perfect unity, revealing the work and mission of the Messiah ages before He came into the world. There is nothing in the entire series which is incongruous with the single authorship of Isaiah as inspired by the Divine Spirit; for prophecy involves the prefiguring of things to come, even to the definite prophecy of the Virgin Birth. That there is a mysterious foreshadowing of coming events even Psychical Research proves. Why then should Christians doubt the power of the Divine Spirit to foreshadow the Messiah and His Mission, when it is so plainly revealed in the Old Testament Scriptures?

JOHN WHITEHEAD.

# THE DIVISION OF THE TRIBES.

(The Word as a Whole: Second Series, IX.)

By the Rev. James Priestnal.

WE may think of Canaan when divided among the tribes, as a type of the organization of heaven and of the regenerate mind. The location of the various tribes indicate to us the order and arrangement of the faculties of the mind when in a regenerated state. The division of the twelve tribes into two kingdoms reminds us that, according to the teaching of our doctrines Heaven is divided into two Kingdoms and this division of the tribes into two Kingdoms is typical of this arrangement in the Spiriual World. But why two Kingdoms in the heavens, when only one King is recognized? Speaking as we must necessarily do in time terms when referring to the Spiritual World we enquire "Has heaven always been divided into two Kingdoms? Was it so organized in the beginning?" As we pursue our enquiries along these lines we are led to a consideration of the reasons why heaven is organized in the way that it is, and our investigations lead us to the conclusion that heaven has not always been so divided. We are all aware of the fact that the Lord has been pleased to vouchsafe to us some light upon this profoundly interesting subject in the writings of the Church.

From them we learn that while the human mind has always been formed of the two faculties, the "will" and the "understanding", they have not always been related as they are today. It is the possession of these faculties which differentiates man from all the lower orders of animals; and by virtue of them he is said to be created in the image and likeness of God. But man is not in the image and likeness of God simply because he possesses these

faculties, but rather by virtue of the fact that his will and understanding are united and form one mind.

In those happy prehistoric times when the Most Ancient Church existed the will and the understanding acted in unity. Man's thoughts sprang spontaneously from his will, what he willed he thought, and he could not think otherwise than as he willed. The affectional faculty entirely controlled the intellectual faculty, which faculty was incapable of acting or thinking independently of the will.

It can be readily seen that while man remained in the order of life in which he came from the hands of God, endowed with a mental organism such as we have described, all would be well; for while he continued to will what was good, he necessarily thought what was true, for what was good in the will was truth in the understanding and truth was produced spontaneously in the mind through the activities of pure and good affections. While retaining his original state of purity man's mind was a veritable Eden, love to the Lord was his "tree of life," while all the beasts of the field, or subordinate affections were dominated by this ruling or supreme love. But it was essential for man's very existence and development that he should have within him what, for convenience, may be termed "opposites," so that his loves and desires might be provided with a field for action and reaction. Thus together with his spiritual soul man was provided with a mortal and material body. With desires reaching out for things immortal and spiritual and heavenly were associated desires which looked to the earthly, the material and temporal. We cannot conceive of man in any state of life in the natural world, or in the spiritual world for that matter, when he would not be conscious of the existence of these "opposites" in the development of his mental and moral life. He would at all times feel that opposite to God was self; opposite to heaven, the world; opposite to spirit, matter. We need not think of this state of "oppositeness" as a state of antagonism necessarily, but rather as a condition providing a field through action and reaction for

man's proper and normal development. This consciousness of opposites was man's tree of knowledge of good and evil.

He was endowed with a rationality which enabled him to see clearly that love to the Lord was opposite to love of self, that the love of heaven was opposite to the love of the world, that the love of the body was opposite to the love of the soul and also that the quality of his life would be determined by the love craved and followed as the chief end in life.

How long man retained this celestial condition of life we do not know. We do know that he finally permitted the sensual and natural to dominate the spiritual. He listened to the suggestions of the serpent and fell. When evil was introduced, the will (represented by Eve) was first seduced, and the understanding (Adam) yielded to its persuasive influence.

What then was the condition of man after having yielded to the suggestions of his lower nature and followed that course in preference to the dictates of his higher and nobler instincts? He enters upon a downward course without the power of self-control. His understanding being entirely under the control of the will he could not reflect upon the nature of his conduct. For as truth from love had illuminated his intellectual faculty when he willed and loved goodness, so falsity from evil must now envelop his pathway, since his love had become perverted and evil. It is evident that if the understanding was so dominated by the will that it could not think other than that which the will suggested, if the will were evil, the thought must necessarily be false in its essence; and if it were impossible to know and reflect upon truth and righteousness, how much the more impossible would it be to act according to them! It was inevitable, therefore, that a flood of falsities should finally bring about the end of the Most Ancient Church.

But how was even a remnant of the race to be preserved from utter extinction, if the understanding was to remain so completely dominated by the will when the will had be-

come so depraved as entirely to corrupt the understanding? The only hope for man lay in possessing the power to reflect upon the state of his own heart and to use the knowledge thus acquired in correcting and removing the evils of his life. In order to make this possible, the Lord miraculously effected in man that which we may safely affirm was the most remarkable psychological change the human race has ever experienced. He separated the will and the understanding so that the understanding, in a certain sense became a distinct entity from the will to the extent of being able of itself to examine the will, analyze its quality and ascertain its real nature. But before the safety of the race and the regeneration of man could be permanently assured, something else was necessary in addition to this separation of the will and the understanding. Certainly under this new condition light would come to the mind revealing the evils of the will, but how were those evils to be fought against, subdued, and rejected? They were the very life of the old perverted will and this faculty was incapable of reformation and regeneration. The separated understanding might be able to look upon the wreck and ruin of a depraved and fallen will, but in itself this faculty alone was quite incapable of effecting any reformation. A mere *knowledge* of the existence of wrong, even when accompanied with pain and remorse, can never bring about a reformation. Some *will power* must be introduced to give it force and vitality and make it capable of action. The old will as we have seen was incapable of change. It was altogether evil and could not be made subject to the law of God. Therefore, the Lord provided that a *new will* be formed by regeneration, but formed from the truths received in the understanding. Conscience, which is the separating medium between the will and understanding really constitutes the new will, and from this new will man may actively shun evils and effect his own regeneration through the saving power of the Lord. This new condition of separateness of will and understanding, while it provided for the possibility of man's regeneration, was not the ideal condition. It was

a regression rather than progression. It weakened man's faculty for the perception of spiritual things, and yet, as we have already seen, this was a necessity.

The state and organization of heaven is determined by the state and organization of the minds of those who compose it. When the two faculties of will and understanding were united as one, the resultant Kingdom of heaven was one, but the division of will and understanding, which two faculties may be truly called the two kingdoms of the mind, resulted in the division of heaven into two Kingdoms. The formation of the spiritual Kingdom was not effected until the judgment, which took place when the Lord came into the world, for it was not until this judgment that the Ancient Church came to a complete end. It is this division which is represented by the revolt of the ten tribes and the formation of the two Kingdoms of Judah and Israel, the Kingdom of Judah corresponding to the celestial Kingdom, the Kingdom of Israel corresponding to the spiritual Kingdom. The elements which formed the nucleus of the spiritual Kingdom existed prior to the formation of that Kingdom and were constituted of those who formed the external of the celestial Kingdom, and also of some in the world of spirits or the lower earth if this may be thought of as in the world of spirits. Those in the world of spirits who entered the spiritual Kingdom were saved through the Lord's coming into the world. In the *Arcana* 6854 we read:

"They who are called spiritual were saved only by the Lord's coming into the world. The reason is that the Divine passing through heaven which was the Divine Human before the Lord's coming, could not reach them, because the doctrinal things of their church were for the most part not true, and consequently the good which is of the will was not good. As these could be saved only by the coming of the Lord and thus could not before be raised into heaven, therefore they were meanwhile kept in the lower earth in places there which in the Word are called pits . . . guarded by the Lord. But after the Lord came into the world and made the Human in Himself Divine, then He delivered those who were in pits and raised them to heaven, and out of them He also formed the spiritual heaven, which is the second heaven."

In 6858 we read:

"Before the coming of the Lord into the world, evil genii and spirits occupied all that region of heaven to which the spiritual were afterwards taken up; for before the coming of the Lord many such roamed at large and infested the good, especially the spiritual who were in the lower earth; but after the coming of the Lord they were all thrust down into their hells, and that region was set free and was given for an inheritance to those who were of the spiritual church."

In considering this subject in its relation to the regeneration and spiritual progress of the individual I have a few brief suggestions to offer. Rehoboam went to Shechem to be made king. Shechem we are told signifies the truth of doctrine; and Rehoboam representing the principle of celestial love perverted, or self-love, his going to Shechem suggests that when self-love desires to rule, it does not hesitate to use the truths of doctrine to further its own ends and to secure dominion. Do we not find that no matter how utterly selfish the purposes of men may be they will profess to act from good and honest motives, and seek to justify their course of action by the letter of the Word? Self-love is never slow to find some excuse, some reason for its course of action.

Jeroboam denotes the intellectual principle and his appeal to Rehoboam represents the attitude of the enlightened understanding towards the demands of the perverted will. It seems to suggest that state so frequently experienced during the progress of our regeneration, when our better judgment sees that the desires and plans of our selfish hearts are wrong and must be resisted. Indeed this controversy between the enlightened understanding and the depraved will is continually recurring during man's regeneration, for this thing is of the Lord.

The reply of Rehoboam to Jeroboam, "Depart yet for three days, then come again to me," suggests that condition of freedom of choice and action which is the prerogative of every man, for no matter how deeply self-love may have become rooted in his soul, he is still free to choose the evil

or the good. As the infernal powers of hell are increased, so are the powers of heaven increased correspondingly, so that the equilibrium in which man's freedom rests is never destroyed.

We may think of the consultation of Rehoboam with the old men as representing one's reflection upon the evil course of conduct he anticipates pursuing, and the dictates of conscience warning against such a course by bringing to mind the truths which warn against and condemn such action. While on the other hand Rehoboam's willing acceptance of the advice of the young men suggests to us the willingness of the corrupted will to find excuse and justification for self-indulgence by the apparent truths of the Word, falsified and interpreted in such a way as to apparently sanction a wrong course. Rehoboam's threat, "My father made your yoke heavy, but I will add to your yoke; my father chastised you with whips, but I will chastise you with scorpions," indicates to us how tenacious is the influence of self-love over the life of the individual; while the refusal of the people to accept Rehoboam, and their reply, "What portion have we in David? neither have we inheritance in the son of Jesse: to your tents O Israel," plainly shows to us the activity of the new will and understanding against the power of the old perverted will.

The sending of Adoram to levy taxes over the seceding tribes of Israel, shows us how persistently the corrupted will will continue its efforts to dominate the life, and how constantly must the regenerating man be on his guard to resist its encroachments.

We have taken Rehoboam as representing the depraved and perverted will in our consideration of the subject. We might also consider Rehoboam in a good sense as representing the demands of a love of service to the Lord, and the attitude of Jeroboam and Israel as representing the resentment and rebellion of the intellectual faculties to these demands, and Jeroboam's introducing the worship of the calves as indicating a desire to be satisfied with a mere external religion without obedience and love entering into it.

With regard to the connection of this incident with what precedes and follows it, it appears that the preceding reigns of Saul, David, and Solomon may be considered as ideal progression of the regenerate life through the three planes of the natural, spiritual, and celestial; and the history following as representing the working out of these ideals in actual life.

James Priestnal.

# THE NEW INTERPRETATION OF NATURE.

By the Rev. C. W. Clodfelter.

IT is my purpose in this paper to draw a distinct line between natural phenomena and metaphysical principles, and to account in some measure for the former by means of the latter. Therefore in the interpretation of nature I am dealing specifically with that objective form or phenomenon which we commonly perceive by means of the five senses: such as earth, rocks, trees, water, air, and all other phenomena capable of coming within range of sense experience. All such phenomena, whether perceived by man or angel as sense objects of immediate experience, are for the purpose of this paper what is meant by nature. However, since nature is generally thought to be directly connected with the sun by its heat and light, in premising this larger aspect of nature which includes all sense phenomena of both men and angels, reasons should be stated for so enlarging the field.

Primarily the reason for viewing nature in this all-inclusive manner is found in the essential character of all ontological problems which concern equally the sense life of both men and angels. Thus either man or angel may discuss the question whether being is ultimately one or many, and the relation between real being and its appearance.

It may be argued that so to enlarge the borders of nature will wipe out all distinction between nature and metaphysics. But such is not the case. The metaphysical problems will not be dissipated by the experience of death through which man must pass. The continuation of conscious life after death is too generally admitted to require proof. In the after-death experience, as well as now, the contents of man's experience must fall into two groups of

mere things, metaphysical and physical. Therefore any interpretation of nature which does not take into account the physical phenomenon as it is found in the whole of man's experience is incomplete.

To be more specific, my position is that sensation proceeds from the metaphysical, while nature or physics is merely those objective forms with which the metaphysical is indissolubly connected. All phenomenal experience must be the result of the joint operation of both the physical and the metaphysical. One is incomplete without the other. Therefore what I desire to term nature is the complete counterpart of the metaphysical; it is the whole of each and every objective physical object that is known to sentient life.

We no longer have need of the old classification of physical nature on the one hand and minds or spirits on the other. Wherever you find one, there you will find the other also; either of which standing alone is but one aspect of the whole.

The fundamental difficulty in the problem of nature arises when we ask ourselves what do we mean by body, and what is body made of.

No one is now so foolish as to claim that any body is or can be a fixed unchanging entity. We can no longer hold on to the notion that there exists many very small particles, each of which is an indivisible orb or body of space-filling mass, and that bodies which we see and touch are simply collections of these smaller ones. Should we admit the particle theory as a fact of experience, the question "What is body" still remains unanswered, for we still have left unexplained the particle to which we attribute all that we mean by body.

We must therefore look elsewhere than to the particle theory for a reasonable cosmology of body or nature. Thus we turn from realism to idealism, and in the fact of love we find the only reasonable philosophy of nature, mind, and being; or cosmology, psychology, and ontology.

What is love? The fact of being.

What is mind? The consciousness of being.

What is nature? The appearance of being.

In this three-fold notion of love, mind, and nature, we can perceive nature as something projected from love and represented in the mind. So we may think of love as a self-projecting, self-representative, and self-realizing system.

Here we have a philosophy of nature or body which is wholly independent of space-filling mass, and in which we find nothing to controvert any law of logic.

No one can deny that love itself is *being,* and that it is independent of space or time.

Now let us reverse the order and assume that body, not love, is the supreme fact of being. And it matters not whether you call it nature, world, or particle, so long as you attribute to it space-filling unintelligent mass. Can you conceive of this kind of body projecting itself into something that is wholly unlike itself, such as mind or love? If so, how? By what process shall we account for body becoming mind, or consciousness? Some would answer, by the fortuitous concourse or mixing of such small bodies, followed by organic products. But would this not make mind or consciousness merely the dust from the grind of such particles? Besides we can find nothing in the nature of bodies to make them grind; and we can not conceive that motion or grind of bodies could result in anything other than either the forming of larger bodies from the union of many or the breaking up of larger into smaller ones. Thus the more we reason from this premise the deeper we become involved in irrational difficulties. But with love as the one uncreated source and origin of man and nature, we do not become involved in contradiction. Love can construct its own facts; it can group, systematize, arrange; it has within its acknowledged being properties, qualities, and relations, all of which are livingly bound up with it as the undeniable right and fact of its being.

The interpretation of nature as that apparent physical objectivity projected by love avoids the deadly position of

the realist who is forced by logic to separate the thing experienced into something real and apart from all experience. The realist maintains that nature is capable of standing alone fully independent of all experience; that independent of all love, either Divine or human, the natural universe would remain an indestructible space-filling mass. He might as well argue that the picture on the screen can stand when the film has been removed, or that the worlds seen in dream-life remain undisturbed after the dreamer has awakened.

The realist maintains that the whole of concrete experience is forced upon the individual by objective reality. What could be more absurd! We have no right to say that objective reality forces itself upon the infant and produces all of its experience. Quite the opposite is true. The infant makes its own way until able to form a distinct concept of it. It was always a concrete experience within itself; and it was self-realizing before it had abstract concepts of other individuals and things. Man is always able to form abstract concepts; but abstract concepts do not and never can produce concrete experience. For example, if I should attempt to transfer my idea of book to one who has never seen or heard anything about books, I could not do it by simply presenting to him a book. By so doing he would derive only a visual image of book, whereas the unifying powers of my mind have bound numberless ideas in book; and we may truly say that the whole of book can exist only in the whole of universal experience, or in Divine Love Itself. For no two persons can book be exactly the same object as to all its qualitative attributes; because no two abstract concepts are formed from a like whole of experience. Accurately speaking book can not be the same at two given times for the same individual, because in each instance it flows forth from a concrete experience that is in some respect dissimilar.

The realist, therefore, is troubled because he cannot find a static universe upon which to rest his philosophy of inorganic lifeless substratum mass.

When we say that nature is purposive, and by this mean that physical objects behave as they do by inherent natural power, we have lost sight of the universal and most essential aspect of nature, which is the exact opposite; viz., that it is non-purposive in character.

The uniformity of behavior which is termed law is no part of nature, and gives us no clew to its essential character as a dead inactive substratum upon which life plays its finalities. We should stop talking about nature as though it were a mechanical force within itself. There is nothing mechanical in nature. The mechanical aspect is purely hypothetical or super-imposed. Let him who believes in the purely mechanical aspect of nature attempt to prove his position by mathematics, which we are so accustomed to regard as a correct formula or principle by which to measure natural things, and he will find that his standard of measurement breaks completely down when applied to first principles. Let me illustrate: Say it is two hundred and fifty miles from Boston to New York. Now ask any mathematician how many positions it is possible for a train to take between Boston and New York, and he will without hesitancy reply, "An infinite number." Then ask him whether it is possible to traverse an infinite number of positions, and he will as quickly answer, "Impossible." Yet every train that has plied its way between Boston and New York is an indisputable fact of experience contradicting the accepted standard of every great mathematician. Mathematics, then, is a stiff arbitrary standard of measurement which works nicely when applied to arbitrarily fixed mechanical or natural forms; but it has no place in the more flexible ontological aspect of life itself.

As we study the behavior of bodies and classify them, we find nothing but a vast system of positions which seem to shift about in space and time. If it were not for the fact that we arbitrarily establish uniform mechanical laws by which to measure fractional parts of nature, we would soon lose our notion of space and time. In every instance our arbitrary standard of mechanical measurement, which

seems to work so nicely when applied to nature, is a complete farce when we attempt to apply it to the whole of nature. It is because we are dealing with fractional parts only that it seems to work with mathematical accuracy. When we attempt to analyze any part of the natural concrete universe, we find it vanishes. The mechanical view of nature always breaks down under criticism. Zeno hopelessly shattered the mechanical mass concept of nature more than 400 years B. C.; but only now has the force of his logic begun to break through the dense incrustation of conventional thought.

It is only by withdrawing our minds from natural or conventional thought, and grounding it in spiritual or love ideas and thoughts, that we may hope to approach the origin of nature.

The interpretation of nature by means of a natural sun, as given by Swedenborg, is wholly inadequate, and was not advanced by him as the solution of the problem of nature, but was evidently intended to serve as a resting point for limited natural comprehension; because, as he says in "Divine Love and Wisdom," 306, "It may be otherwise described by words originating in spiritual ideas, because they are free from space."

We are left with but one alternative; and that is, to view the whole universe as one teleological system. It is one great system of love with its wisdom perpetually projecting, in the fulfillment of its purpose, that which we term nature. Sensation is from life, while form is proper to nature. (Conjugial Love, n. 380.)

Just how all-wise love can project from itself, through man, that which we here term nature, may be beyond the range of finite comprehension; but the fact that it does, is the new interpretation of nature ever becoming more and more the acknowledged truth of religious and philosophical thought.

C. W. Clodfelter.

# THE LUMINIFEROUS ETHER: (I) ITS RELATION TO THE ELECTRON AND TO A UNIVERSAL INTERSTELLAR MEDIUM.

By Frank W. Very.

THERE has arisen at the present time a new doctrine which declares that there is no ether, or universal atmosphere consecrated to the propagation of luminous waves, but that light consists of discrete "quanta" of luminous energy, thrown off from vibrating electrons and originating in their disturbed motion. This proposition appears to be well founded; but it does not therefore do away with the necessity for a universal medium, though this medium should no longer be called "the luminiferous ether." I have adopted for the universal interstellar atmosphere the name of "aura," a term which I have borrowed from Swedenborg, who uses it sometimes to designate a universal atmosphere, a "purer ether," assigning to it in the end a gravitational function, and placing it as an antecedent to the light-bearing ether.

While the universal aura, or "ether of space," as Sir Oliver Lodge calls it, has no mass, the case is different with the electrically organized "ether," of which Sir J. J. Thomson in his "Electricity and Matter" has said: "All mass is mass of the ether, all momentum, momentum of the ether, and all kinetic energy, kinetic energy of the ether." Here, however, he points out that "the concentration of the lines of force on the small negative bodies—the 'corpuscles' [or electrons]—is so great that practically the whole of the bound ether is localized around these bodies"; and this follows because the energy per unit volume in the magnetic field of the moving electrons diminishes in proportion to the inverse fourth power of the

distance.* This alone shows that gravitation can not reside in the electrically bound ether, since the efficacy of gravitative force is related to the inverse *square* of the distance; nor can gravitation depend upon the mere revolutions of the electrons, though these, if uncompensated, may generate an atomic *magnetic* field. On this account and because the magnitudes of the electric and gravitational forces are of a totally different order, we are driven to seek for some mechanism for gravitation different from the disturbance produced by a simple electronic revolution *per se*.

It is assumed by Thomson that his corpuscles are spheres. It does not appear possible that electrons can have the ring-vortex form which Lord Kelvin assigned to his vortex-atoms; for these could not unite into vortex filaments, or unite in any way except by two neighbors alternately threading each the other periodically.

*William Sutherland has considered the reason for this law in an article on "The Electric Origin of Molecular Attraction" (*Philosophical Magazine,* Ser. 6, Vol. IV, p. 625, December, 1902). "The theory of magnetism familiarizes us with an inverse fourth-power force between magnets at distances great compared with their lengths. In applying this known magnetic result to account for molecular attraction, we are at the outset confronted with the difficulty that in the case of magnets the force is as often repulsive as attractive, the nature of the force depending on the relative direction of polarities in the magnets, whereas the molecular forces required to account for cohesion must be preponderatingly attractive." On further examination, however, he finds that "the attractive forces by their own operation tend to increase themselves, while the repulsive forces tend to decrease themselves." Thus if neighboring magnets, or electric doublets approach each other, the "axes tend to take the same direction, and therefore on this account they exercise a stronger attraction on one another; and also because attracting forces varying inversely as the fourth power of the distance produce motion which increases their strength, there are two causes which make the attractive forces amongst a number of moving doublets of more dynamical importance than the repulsive." The applicability of the law to any medium rests upon the magnetic properties of its least constituents.

Swedenborg's "ethereal particle" was also supposed to be spherical, and was thus fitted to receive all kinds of vibration without distinction. "The ethereal particles thus formed can subsist under any form of motion and with perfect aptitude to it" (*Principia,* Part III, Chap. V, No. 6). But more noteworthy was his conception of a peculiar sort of vortex-particle, to which we shall return, having a structure of such a nature that similarly rotating particles may unite into vortex filaments. Such a structure lends itself admirably to the explanation of several phenomena, such as the polarization of the magnetic medium under the influence of an electric circuit, and leads especially to an idea of the way in which ether-particles are formed by electrons out of the aura through the aid of forces in this medium; and as if foreseeing such a relation, though there were then few facts on which to base it, Swedenborg assigned an ethereal origin to electricity as well as light, and had a vague idea of a distinction between "warm and cold light," or, as we should now say, between the radiation of a heated body and electrically produced luminescence, linking the "cold light" with electricity. He also assigned both a vibratory and a corpuscular nature to his luminous "ethereal particle," thus combining the Newtonian and Huyghenian hypotheses—a view to which we are in a fair way to return.* After several speculations of this sort, he restrains himself with the words: "Much more might be said, but which I omit, as I have no experiments to prove my statements."

The vortical form in question was assigned to a particle of the magnetic medium. It had a rational basis in the fact of the obvious existence of vortex motion in that medium, as revealed in the magnetic phantom; and some of its properties have seemed to me too valuable to be laid on the shelf of unverified hypothesis. There is an opportunity for a resuscitation and modification of this scheme today. From the same mine of suggestions, now happily capable of a

*For a fuller account of this subject, see my "Prevision of Scientific Progress." Boston: B. A. Whittemore, 1914.

certain amount of confirmation by experiment, I think we may borrow, with some modifications, a working plan of an atom.

Let us assume that there is around an electron a condensation of the aura in which its electric properties reside; that the electron both rotates on an axis and also pulsates with a radial, regular, and uniform motion at all points of its surface, being urged to this motion by an internal resilience; and that its shape is that of an approximate sphere with a central core, for which a reason will be given later. The electron is incapable of further compression, but is surrounded by its own ethereal "atmosphere" in which the pressure diminishes outwardly at a very rapid rate. During steady motion, this atmosphere moves with the electron and virtually forms a part of it; but the adhesion is so slight that under sudden shock the envelope is stript off and becomes a spherical ethereal particle which pulsates and oscillates within limits, but does not rotate. The naked electron immediately takes to itself a new atmosphere formed out of the illimitable aura, and may almost immediately lose its garment again at the next shock. Thus a single electron can undergo a succession of shocks which generate a series of ether-corpuscles, each with a differnt, but harmonically related variety of vibration, which could not happen if the electron as a whole were immediately converted into an ether-corpuscle.

Professor W. H. Bragg, who was the first to indicate the probable corpuscular nature of the Röntgen rays, suggested that "an electron of given energy may be *converted* into a light-quantum of equal energy and *vice versa*." This at first seemed a permissible interpretation of the experimental evidence; but now that it is known that *the X-rays carry with them the peculiar vibrations of the electrons characteristic of the atoms composing the anti-cathode*, it becomes evident that this is not an immediate conversion of electrons in the cathode stream into ether, but that the electrons from the cathode are absorbed by the target and in this process they produce disturbances in the electrons

and the ether already attached to its atoms. The electron therefore preserves its identity, and is *associated* with the ether, rather than converted into it.

The ether-particle thus formed is a sphere of the same size as the electron. Its pulsation gives it mass which, together with its onward motion, causes it to have momentum. Its oscillation gives it alternating positive and negative electric sign and a reciprocating magnetic field, the whole constituting a least quantum of electro-magnetic energy. Because the electrons everywhere repel each other, and because radiation is an affair of surfaces, the emission of radiant ether by any portion of matter, from its origin, takes the form of a spherical wave.

Conjoined with its electron, the ether-particle may be said to have had a previous existence of a relatively quiescent sort, but as a free entity it necessarily moves onward with the velocity of light, carrying with it its own invariable quantum of energy. Consequently, the energy of radiation is measured by the number of ether-particles in the unit of volume. This follows from Planck's epochal discovery that the radiant quantum is a fundamental constant of nature. Eventually, the ether-particle, which has been formed out of the aura, is re-absorbed by the medium; but because the frictional resistance of the aura is very minute, the progress of absorption is excessively slow.

*The Assumption that the Ether-Particle is derived from an Electronic Envelope.*—A fundamental difference between a free ether-particle and an electron is that the latter rotates on an axis, and has polarity, but the former does not rotate and, having a perfectly spherical surface, is thereby free to take up any form of oscillation and transmit it with complete identity as to all of its phases.

The electrons which issue from the cathode of an X-ray tube, strike the atoms of the target; whereupon certain electrons attached to these atoms have the rotations of their envelopes transformed into a rocking motion, and the stripped-off envelopes proceed as vibrating ether-corpuscles; for the X-rays, no less than the luminous rays, are

corpuscular "quanta" of radiant energy, characterized by an extraordinary rapidity of vibration, which, since it originates in an electronic oscillation, I conceive to be an *oscillatory* vibration.

An advancing electron, moving in the direction of its axis, produces by its rotation and carries along with it a vortex-filament of the aura which is the electron's magnetic field, due to its motion and made up of circular "lines of magnetic force", or currents of minute size in the adjoining aura, concentric with the axis of the electron. Sir J. J. Thomson supposes that the electron is also accompanied by radial vortex-filaments which are its *electric* lines of force; and that when the velocity in the axial direction increases, these lines crowd towards the equatorial plane thus giving greater resistance to motion, or greater "inertia." According to my present proposition, the steady orbital motion of the electrons within the atom is *always* substantially in the direction of their axes of rotation, but at speeds much less than that of light.

If the lines of electric force about an electron are vortex-filaments, this would seem to imply that the magnetic aura is itself composed of particles still smaller than the electrons, which are also rotating and which become polarized, or arranged in radial filaments under the strain in the medium set up by the rotation of the electron, perhaps combined with some other form of motion. This suggests that electrical attractions and repulsions may be associated with the rotations of the electrons, attended by vortices in the aura, but that gravity originates from waves of longitudinal vibration in the aura (the counterpart of sound waves in the air) produced by the rapidly alternating expansion and contraction of the electrons. This explanation requires that there must be a perpetual elastic action and reaction in alternation between the inner contents of the spherical electrons and the volume of aura which fills an "aural cell," at an electronic surface of transition which is not far from spherical and of fixed dimensions determined by some property of the aura yet to be investigated.

On the supposition that an electron is a rotating sphere, or near sphere, of aura when translated at moderate speed, it does not follow that the shape will be retained at higher speeds. More probably any accentuation of the progressive motion will be accompanied by increased resistance with transition from a sphere to an oblate spheroid, and final dissipation by centrifugal force if the speed were to exceed the velocity of light, for which the resistance would be infinite with the lines of electric force compressed into an infinitely thin sheet. But a spherical particle of ether which is without any rotation, moves at once with the velocity of light by virtue of the properties of the aura out of which the ether is made. I shall show further on that the electronic rotation is so rapid that the shape is probably not merely spheroidal, but is that of an annulus or cored vortex-ring.

The electric field of an electron is therefore made up of static radial lines of strain in the aura, which are accompanied by a magnetic field of kinetic lines of flow whenever the electron advances, both together constituting a consistent electro-magnetic dynamic system in the aura.

Just as the larger Faraday tubes of electric force between oppositely electrified bodies are composed of stretched chains of polarized *atoms,* where the individual members of the chain are kept in connection by streams of moving electrons, so the finer threads of electric force about the electrons, repeating the structure on a smaller scale, require chains of still finer polarized particles of the aura,—the entire electric system comprising three orders of magnitude, namely, atoms, electrons, magnetons. Here, however, by an alternation of properties which seems to be inevitable in the relation and connection of these different orders of magnitude, the connecting lines of the aura are not lines of flow, but are made up of rotating magnetons held together by magnetic attraction; for all the properties of the aura, as a whole and as to its least units, are magnetic. The magnetons lend themselves as naturally to *rotations* as the electrons do to the *flow* of electric current.

Thus the normal motion of an unrestrained electron is a rectilinear electric flow, carrying with it always an accompanying orbital circulation of magnetons. The latter is the magnetic field due to the progressive motion of the electron, while any magnetically originated flux is, first of all, either a circulation or a rotation of magnetons which constrains the electrons to flow according to their own peculiar mode.

According to Sir J. J. Thomson's view, X-rays, and therefore we may now say all luminous rays, since it has become obvious that there is no distinction of form between the two, are propagated rectilineally as kinks in a universally present system of ether tubes. But a discrepancy immediately appears, because, as we have seen, the ethereal structure "is localized," according to the same authority, and is by no means universal.

But Bragg has shown that the X-rays are probably of a corpuscular nature equally with the cathode rays, and since the electrons disappear in producing X-rays, while the latter, in turn, are capable of "generating," or more probably of setting free electrons anew, since the light-rays, when they meet an electronic system which can execute the same rhythm, or dance to the same tune, are absorbed, and the energy of the light is communicated to the electronic system, it seems fairly demonstrated that electrons and ether-corpuscles are structurally connected; and that they are identical as to magnitude is very probable, the chief difference between them being the presence or absence of axial rotation.

In regard to Thomson's fibrous ether, Professor Millikan, in his book on "The Electron" (p. 230), raises the objection that "When we maintain the field constant and vary the charge on the drop [of liquid to which an electron is attached, where the motion of the suspended drop is controlled by the electric field], the granular structure of electricity is proved by the discontinuous changes in the velocity, but when we maintain the charge constant and vary the field, the lack of discontinuous change in the

velocity disproves the contention of a fibrous structure in the field, unless the assumption be made that there are an enormous number of ether strings ending in one electron." This seems to him improbable, but perhaps the ethereal envelope, attached to an electron, has an analogous structure formed out of the aura. If the aura is composed of polar particles which are minute in respect to the size of an electron, the radial filaments of polarized magnetons, attached to an electron and which constitute its electric field, are very numerous, fulfilling Professor Millikan's proviso in this respect; and if the convergence of these vortex-filaments is what produces the surface condensation to balance the relatively enormous centrifugal force of the whirling electron, they act like so many compressed springs.

The shaking off of the electronic envelope gives to the ether-particle thus formed an oscillatory springiness and provides it with an analogous system of vortex filaments by which it takes hold of the aura in transit, or else has its energy transferred to a new electron upon absorption. A considerable amount of energy becomes latent in the generation of an ether-corpuscle and is not included in the "radiant energy" which it conveys. This energy of formation is derived from the constitutional energy of the electron, and is proportional to the frequency of the luminous vibration, but *not to the radiant intensity.* This, it seems to me, is the meaning of Einstein's equation:

$$h/e = \Delta V/\Delta \nu$$

where $h$ is Planck's energy-constant, $e$ is the charge on an electron, $\Delta V$ is the change of the electrical potential, and $\Delta \nu$ is the corresponding range of frequency, the higher frequency requiring a correspondingly greater electric potential for its production. Lenard's discovery (*Annalen der Physik,* (4), Bd. VIII, S. 149, 1902) that in the photo-electric effect, the energy with which electrons are thrown off from a metal on exposure to ultra-violet light is wholly independent of the intensity of the light, requires that there

must be an independent source of energy which is presumably structural. This structural energy of the ether was originally derived from the electrons, and may be returned to them.

The ether-corpuscle is a distinct entity, but it has a structure which has extension into a surrounding field of potential energy; and once organized, this structure can experience vicissitudes which are the "radiant energy" of the combination.

*Distinction between Radiation from Satellite Electrons and from those of the Nucleus.*—For a uniform revolution of electrons in an orbit, with a constant radius vector, there is no acceleration and no production of electro-magnetic radiation. The latter arises through perturbations which change the radius vector of the orbit, just as a uniform electric current in a conducting wire produces no induced current, but the latter arises when the first current is made or broken, thus as a result of a sudden *change* of current. Similarly, the removal of a satellite electron takes place by a series of jumps from one stable orbit to another, each explosive dislocation of the uniform orbital motion and substitution of a new orbit producing a radiant vibration of a special wave-length; and a succession of such dislocations causes a series of discrete, but harmonically related vibrations appertaining to a set of associated orbital distances and constituting a spectral series.

On the other hand, thermal shocks arising in the interrelations of the molecules in a solid or liquid, or in a highly condensed gas, and which are powerful enough to affect the entire spherical shell of electrons of the nucleus of an atom, produce continuous changes in adjoining electronic orbits distributed in parallel over the surface of the spherical shell. Thus if the nucleus of the atom expands, all of the nuclear orbits enlarge. The combination of expanding orbits is like an ever varying spiral motion with a continually changing radius vector. Whatever shocks these electrons of the general atomic sphere receive will generate a whole range of gradually varying frequencies

giving rise to a continuous spectrum. Hence the continuous spectrum of a radiating solid must be attributed wholly to the vibrating nuclei of its atoms, consisting each of thousands or tens of thousands of electrons. As a rule (with a few partial exceptions as in the case of erbium, etc.) there are no linear intensifications in such spectra, that is, the satellite electrons play such a subordinate part in the transformation that their periods are not in evidence. The nuclear perturbations are a function of the body's thermal state. On the contrary, electrically produced *luminescence* arises from disturbances which affect the satellite electrons, and which do not necessarily touch the electrons of the nuclear sphere. The bright-line luminescence spectrum may proceed from comparatively cool material. Somewhat similar to this is the radiant emission of the firefly, where considerable radiation of short wavelength in the form of a broad spectral band, which if it were thermally produced would correspond to a temperature of several thousand degrees, is actually given off at the temperature of the living body without the corresponding infra-red rays of much greater total power which are ordinarily associated with low-temperature emission and still more with such luminous emission. This was determined by direct spectro-bolometric observations of the entire energy-spectrum from the visible rays through the infra-red.*

*The Dual Aspect of the Rotating Electrons becomes the Ultimate Origin of the "Two Electricities."*—The proposed hypothesis of the internal structure of an atom assumes that the atom consists solely of electrons revolving in orbits, that there is but one sort of electron, though it has two aspects, because it is a rotating spherical mass, or what is more likely, a cored vortex, or near-sphere, of the universal medium, and has a definite volume and rotational energy determined by the properties of this medium. There is but one *known* sort of electron, and if the fore-

*See Langley and Very, "The Cheapest Form of Light," *American Journal of Science,* Vol. XL, p. 97, August, 1890.

going definition be accepted there can be no other. The hypothetical "positive electron" has never been isolated simply because it does not exist. The conception needs but a few minor details to make it perfectly definite and simple. It remains only to trace the consequences of these assumptions, and here there is room for much variety in the compounding of motions. Whatever atomic scheme is proposed, however, must conform in its results and properties to certain well established physical and chemical facts. The chemical and spectroscopic facts are already well on the road towards explanation through the hypotheses in respect to the orbits of satellite electrons which are accepted today. Naught but the nucleus need be considered here.

An aggregation of electrons which all have the same electric properties will evidently tend to expand by the mutual repulsion of the several entities, and will be dispersed unless controlled by some form of consentaneous motion which shall overcome this dispersive tendency. Given some mode of limiting the dispersal, the mutual repulsion of the parts will nevertheless tend to distribute them into a spherical shell. Hence an atom composed of electrons probably has the form of a hollow sphere, and must necessarily possess an even number of layers arranged in pairs with opposite electrification.

The electron itself has an analogous structure, since it is a spherical vortex by close approximation, as we shall see, formed from the aura by rotation and condensed at the surface where it sustains the whole pressure of the aura by the centrifugal force of this rotation, but rarefied within.

The interior of the atom is filled with aura, that is, the entire atom is an electronic and ethereal structure finited by motion out of the aura; and the aura itself (except in the immediate vicinity of the electrons) passes freely through the interstices of the structure and serves to nourish it, to animate it with energy (for the aura is a great reservoir of energy), and to govern and define the modes and properties of the structure.

In 1903 Eichenwald repeated Rowland's experiment with modifications, by causing an electrified glass disk, coated on both faces with metal, to revolve. If the dielectric carries the magnetic aura along with it, there should be compensation between the dielectric and metallic influences upon the aura, and an absence of magnetic effect. But the magnetic effect was found, which proves that the aura is immobile in respect to the motion of matter through it. The sun and planets are not floating in the aura which immediately surrounds them, like corks in a stream of water. If the universal magnetic medium flows through matter, or is not set in motion by the motion of matter in material progressions, the medium may nevertheless suffer a slight retardation in the vicinity of the matter. This will have the effect of a condensation of the aura. It is not necessary that the general motion of the aura shall coincide with that of the matter which is contained within the same volume of space; for the matter takes hold of an immense volume of aura by its gravitational lines of force and is thus connected with and controlled by the general aural movement, but is independent of the aural movement in the immediate vicinity. Thus the aura moves in its own vast galactic sweep and exercises a large-scale, or general control over the movements of matter, but is independent, or as if immobile to its lesser motions.

*The "Saturnian Atom" and the "Moseley Number."*—The spherical surface of the atom may be deformed into an oblate spheroid by a sufficiently rapid translation in the direction of the atomic axis, but any marked distortion from a symmetrical form would lead to a breaking up of the atom. Such distortion, however, becomes difficult if the electrons are in exceedingly rapid orbital revolution. It is supposed by Bohr that certain electrons occupy a circumferential position, arranged in rings about the nucleus in a common plane so as to have some analogy with the rings of Saturn, whence the arrangement has been called the "Saturnian atom," that they are thus revolving in orbits around a central nucleus, and that the frequencies of line

spectra are determined by perturbations of these satellite revolutions. It is also known that the atom contains an enormous amount of energy which is invariable except in radio-active disruption of the atom. I assume that this inner invariable energy of atomic constitution is that of still other orbital electronic revolutions of great velocity within a central nucleus in which resides by far the larger part of the mass, and whose stability is far greater than that of the satellite orbits. The latter are relatively few, and we may assume that their number is that of the Moseley number, characteristic of each element, which varies between 1 for hydrogen and 92 for uranium. For the moment we may leave in abeyance the question whether the orbits of the characteristic electrons which give the Röntgen rays of the K series are within or outside of the nucleus. For illustration assume them to be inside. Presumably in this case the satellite system of hexavalent uranium is composed of six concentric rings of electrons, composed successively from the inmost to the outmost ring of

$$6, 11, 15, 18, 20, 22 = 92 \text{ satellites.}$$

This gives the number six to the inner ring in agreement with the valency.

The nuclear electrons, on the other hand, reach into the thousands (uranium, about 439,000), and the mass of the atom is practically that of its nucleus. This implies that the electron is the fundamental gravitational unit, and that its power of gravitational attraction is independent of its position in the atom, though the resultant inertia is connected with the gyrostatic properties of the revolving and rotating electrons.

*Origin of the Gravitational Impulse.*—The remaining problem is to find a mode of electronic interaction, diverse from the electrical one, which is capable of producing a gravitational impulse, and one which shall not only not endanger, but which shall conduce to the stability of the atom. Stability may conceivably be maintained electrically, if this were all, by the juxtaposition of two concentric

spherical shells of electrons revolving in parallel circular strands in the same direction and with the poles of the electrons juxtaposed in the direction of the orbital motion as aforesaid (since it is obvious that the planes of rotation of the electrons must set themselves at right angles to the directing attractive forces) forming as many superficial circular vortex-filaments by their combined motions of revolution and rotation; while the electronic rotations are opposite on the inner and outer shells, giving to the members of a pair of shells opposite electricities. Since the inner shell is slightly the smaller of the two, we may suppose that it has fewer electrons and that the satellite electrons which agree in electric charge, or direction of axial rotation, with those of the inner shell of the pair, are left over and are needed to make up a number equal to the sum of the electrons in the outer shell, thus providing for the precise equalization of electric charges in the neutral atom.

It has been held by several theorists that gravity is of the nature of a longitudinal wave of compression in a universal medium. The simplest way to account for such a wave is to suppose that the electrons are pulsating rapidly, that is, that they alternately expand and contract equably on all sides. I can not see that this will interfere in any way with the simultaneous movements on which the electric and magnetic properties of the atom depend, while the need of a wholly independent origin for gravity seems obvious. But for the urgent call for some working gravitational hypothesis of a mechanical sort to complete the scheme resulting from the new electronic conceptions, I should have no wish to add one more suggestion to the rash, but ambitious conjectures on this subject which have been relegated to the mausoleum for dead whales in the depths of the sea of knowledge.

If the foregoing hypothesis is to be accepted, it seems necessary to distinguish clearly between inertia and mass. An ether-particle may be pulsating like an electron and may thus have mass, but it lacks inertia in its own right, unless vibrating with an oscillatory motion and driven

forth with the velocity of light as *luminiferous* ether. Being assumed to possess "mass" in a certain limited sense, we must ask in what way an atmosphere of bound ether can be attached to, or condensed around the atoms. If the bound ether were that of interatomic radiation, cold matter should cease to refract which is not borne out by observation. The presence of bound ether is not manifested except in so far as it is revealed in the refraction of light, where the velocity of light in the denser transparent media is slower because the "bound ether" which interpenetrates their substance and is never absent whether the matter is radiating or not, is denser, being more strongly attracted by their heavier ultimate particles. Thus this shell of ether, while held to the electrons by attraction, acts almost as if emitted by them up to a certain compensating density, and it is only flung off when some sudden change of orbital motion occurs. The supposition that the shell is at once reformed at the expense of the surrounding aura relieves the dilemma arising from its continual loss in the generation of radiation. That there is an intimate relation between the refractive and the electric properties of matter is because ether-corpuscles and electrons are also most intimately related.

Nothing definite is known at present as to the nature of static electric charges upon a solid body, though much is known about the electrification of a gas. The beautiful curled filamentary structure of certain high-tension electrical discharges in air is presumably connected with the viscosity of highly heated gases and a tendency to the formation of complex aerial vortex-rings. The testimony of the electrical stress-figures in resin obtained by J. W. Swan,* where the positive stresses simulate motion under attraction from every direction towards a center, and the negative stresses suggest an attempt at the formation of vortex-rings, or outgoing explosive puffs in a resistant medium, can be interpreted on my present hypothesis to mean that the electrons have poles of different sorts;

**Proc. Roy. Soc. London,* Vol. LXII, p. 38, 1897.

that there is an indrawing of aura through a central core at one pole and outflow at the other pole; that in positive electrification there is a superficial electric shell in which the electrons are so placed as to have their indrawing poles pointing outwards, while in negative electrification the opposite poles are on the outside and there is outflow towards the exterior; and that thus the distinction between positive and negative electrification is that between right-handed and left-handed rotations in the superficial electrons which give the charge. Though the electrons forming the static charge are exceedingly few compared with those making the mass of the solid body, yet the electrical attractions of the charge are comparable with the gravitational attractions of the entire mass.

*Definite Statement and Illustration of the Electric Nature of Matter.*—As a basis of atomic structure, let it be assumed, then, that the atom is formed wholly of rotating, revolving, and pulsating electrons, and that there is but one kind of electron, which consists of a definite volume of the universal medium in rapid rotation. This rotation of the electron can be viewed in either of two aspects; and two right-handed whirls with their equators in one plane will repel each other if, when moving in opposite directions, they meet and are forced into contact, thereafter assuming opposite directions of motion at right angles to the original line of approach. But right-handed and left-handed whirls, that is, electrons which have opposite rotations, can have their equators juxtaposed in the same plane and will mutually attract each other. It follows that there are *two electricities* which may be formed the one from the other by a simple gyroscopic uptipping (at least in theory, whatever may be the obstacles to the change); and thus, in order that there may be stable equilibrium, the positive electricity in an atom must be closely conjoined with an equal amount of negative electricity; for as soon as one of the corpuscles of the atom is set free, it becomes indistinguishable from any other electron, whether coming from a positive or a negative source. The loss or gain of even a single electron

destroys electric equilibrium and converts an atom into a positive or a negative ion with strong chemical affinity.

Next, since we have adopted the theory that the mass of the atom is wholly electrical, it follows that a hydrogen atom consists of 1,844 electrons,* this being the ratio of the mass of a hydrogen atom to that of an electron.

According to Bohr's theory,† a hydrogen atom consists of a single satellite electron in orbital revolution around a central nucleus which has a positive charge, and with a frequency of 3,290 million million revolutions per second‡ given by Lyman's measurement of the shortest wave-length in the hydrogen spectrum. This may be accepted, but it is not necessary to suppose that the nucleus is simple. According to the preceding supposition, the nucleus must consist of 922 electrons rotating so as to give positive electric charge (if they were disposed after the manner of a surface charge), combined with 921 of the opposite rotation which would give negative electrification if similarly disposed, so that the two opposite charges existing in potency are almost exactly neutralized, but with a small positive residual which is the equivalent of the negative charge of the satellite.

If the satellite revolves just outside the equatorial circle of the nucleus, the positive charge of the outer layer pre-

*In his book, "The Universe and the Atom," Marion Erwin has given an ingenious but complicated scheme of an atom which accounts for the Balmer series in the spectrum of hydrogen very well, but demands as a corollary that the hydrogen atom shall contain precisely (12) $^3+4=1732$ electrons. Millikan's latest result for the mass of the electron, which has been obtained by methods of extraordinary accuracy, definitely condemns this hypothesis. Moreover, by an application of Kepler's laws to the electronic revolutions in the atom, Millikan derives Rydberg's number N, or the fundamental frequency constant, with an accuracy of one part in one thousand, and thus not only gets the Balmer series, but explains it in a remarkably simple way.

†*Philosophical Magazine,* Ser. 6, Vol. XXVI, p. 1, July, 1913.

‡See R. A. Millikan, *Science,* N. S., Vol. XLV, p. 327, April 6, 1917.

vails sufficiently to direct the orbit of the satellite and to keep it in the equatorial plane; but stability requires that the satellite's rotation shall assume the relation of negative electricity to the outer shell of positive electricity and that the direction of revolution shall be the same in both. This would also be true if the extra electron were inside the atom. All of the revolutions must be congruous to avoid eventual disruption.

The satellite is relatively free, and it is the one electron which may be easily displaced and lost to the atom, when the nucleus thus stripped becomes a positive ion. The revolving electron which has become free is, I repeat, like any other electron. Conventionally we call it a "negative" electron, simply because it is emitted from what we have agreed to call the negative pole of a source of electric current; but actually it has electric sign solely from its association with other electrons. This becomes evident if we trace the consequences of the meeting of a nominally "positive" ion which has lost its satellite, with a neutral atom. Immediately, if the revolutions of the electrons are congruous, the satellite of the normal atom is shared by the two nuclei and serves to bind them together into one molecule, forming the single *bond* of chemical union. The normal, or neutral, atom behaves as if it were negative in respect to the positive ion and there is the electrical attraction of chemical affinity between them; though, but for the shared electronic satellite, the two nuclei would be mutually repellant from the similarity of their electric charges.

If a normal atom meets with another normal atom having its orbital electronic revolutions facing the same way, can the two unite into a molecule with *two* satellite electrons, either satellite being displaced towards the intermediate plane parallel to the two equators, and perhaps coming into equilibrium on opposite sides of a common orbit? Apparently this is possible, but with diminished affinity owing to a divided attraction.* Two normal hydrogen atoms with

*If $H_+$ represents an atom of hydrogen which has lost a satellite electron, and $H_-$ represents a hydrogen atom which still retains its

congruous electronic orbits, placed on either side of a hydrogen ion, make the unstable molecule ($H_3$) having two satellites, for whose existence under favorable circumstances there is satisfactory evidence.

*Probable Explanation of the Thermal Periodicity of the Elements.*—The theory of complex concentric vortices, elaborated by Hicks, gives a possible explanation of some of the thermal properties of the elements; but it rests upon the hypothesis of a continuous irrotational fluid whose vorticity changes at certain concentric surfaces within the atom, and takes no account of discrete electrons, each a precise replica of all the others. In the effort to see whether the conception of Hicks might not be adapted to the new knowledge I was led to consider that a group of electrons of the same name must tend to expand into a shell by mutual repulsion of the constituents of the group; yet this shell might be restrained from dissipation by further expansion, if it were conjoined with a concentric shell of opposite electrification. Moreover, such a structure may be repeated several times, thus giving the several repetitions in the thermal properties demanded by the thermo-chemical relations of the elements. To hold such

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extra negative electron, the constitution which Bohr attributes to the hydrogen molecule, namely, H-_ H-_ (or the above problematical molecule), is hardly likely to exist permanently according to accepted electro-chemical doctrine, because the two negative electrons repel each other and tend to split the molecule. But the molecule, H-+ H-_ should be entirely stable, and it serves the purpose of Bohr's theory equally well if we suppose that, in the ionization of the molecule, the negative atom alone loses its extra negative electron by the step-to-step process of orbital shifting, becoming in this way similar to its companion atom. If a single electron ($e$) is shared between two atoms, the successive stages of ionization are:

$$H_+ \; H_- = H^e H = H, \; H^e = H, \; H, \; e.$$

The intermediate stage gives no spectrum, but the last or actively transitional one gives the Balmer Series. It is also probable that under certain rare conditions, the hydrogen atom may retain two negative electrons and give the series of lines in the spectrum of V Puppis.

an assortment together as one piece in spite of the tremendous energies demanded by internal revolutions, is not a simple proposition; but possibly the thing may be accomplished if we postulate a medium back of the electrons with a complex vortical flow, somewhat analogous to the Hicks plan, which controls the electronic motions. It is necessary to assume that at each reversal of vorticity, there is an uptilting and reversal of spin in the electrons, considered to resemble gyroscopes, if the expansive force acts at right angles to the directive force. According to gyroscopic analogies, the electrons can rotate either right-handed or left-handed with equal facility as long as the plane of rotation is normal to the direction of revolutionary motion which is that of the directive force; but if shifted radially in the instantaneous direction of the plane of rotation, the electron so urged is liable to be overturned as in a well-known gyroscopic experiment. The reversal of the electron's rotation requires the expenditure of one of Planck's units of work.

Of the hypothetical system of concentric vortices which has been mathematically computed for an assumed irrotational medium, Hicks himself says: "If vortex atoms are realities, the exact quantitative theory developed in this paper can not accord with actual facts, because it is developed with reference to a surrounding irrotational ether, which can not be the case in nature. Nevertheless, many of the general properties would doubtless be similar."*

In the atom which we are considering, the stream lines are "lines of flow" *of the electrons,* but not of their constituent medium, because the components of electronic rotation, or spin, do not vanish as they are supposed to do in irrotational motion, and stream and vortex lines can not "fold together, cross, and expand" in continuity at a limit. Still, even though the gyroscopic reversals are sudden, there is a decided analogy to the condition postulated

*"Researches in Vortex Motion. Part III. On Spiral or Gyrostatic Vortex Aggregates." By W. M. Hicks, F.R.S. *Proc. Roy. Soc. London,* Vol. LXII, p. 335, February 3, 1898.

by Hicks. I will merely note that the alkali metals which are placed at the maxima of Lothar Meyer's curve of atomic volumes, or in positions which, according to my supposition, mark strong intensification of those thermal properties which are given by nuclear constitution, are of all the elements those which are most prone to give a mixed flame spectrum in which the bright lines are accompanied by a strong superposed continuous spectrum, and they are *thermally expanded atoms.* These atoms are therefore at nodal points of the interior organization of their nuclei, each corresponding to the successive addition of a new pair of electronic shells in the order of increasing steps in the atomic weight.

Professor W. M. Thornton* finds that "the periodic curves of density and atomic volume both have the inflection characteristic of hysteresis. They can be built up on the assumption that the internal force by which atoms are held together passes through a simple periodic change and that in the resultant change of atomic volume there is structural hysteresis." Hydrogen, boron, aluminum, copper, ruthenium and osmium, which are the densest atoms of their respective thermal periods, have their atomic weights proportional to the cubes of the first six natural numbers. Presumably, the most complex atom, uranium, has six rings of supernumerary electrons, arranged in one orbital plane, and six pairs of electronic concentric spherical shells, or what may be likened to a twelve-storied structure, and it is doubtful if any larger number of stories can exist in an atom.

The thermal relations of the atoms appear to be those of their central nuclei, both as to chemical properties and as to those radiations which are especially caused by heat. Perhaps this is what Swedenborg glimpsed when he assigned heat to a "central motion of particles."

*"The Curves of the Periodic Law," *Philosophical Mag.* for July, 1917, p. 70.

## The Luminiferous Ether: (II) Its Relation to the Atom.

The particles of ether may be produced out of the aura by some modification, perhaps involving a virtual condensation of the aura; but the process has not reached any final limit, for the ether-particles remain highly elastic, and if there is a shell of ether around each atom, it is compressible since the density of the bound ether in matter varies. It may be admitted that we do not know just what ethereal "density" means, and that it is probably a concentration of some electrical property. Just as spongy platinum, by the powerful attraction of its atoms and the large surfaces of its porosities, condenses gases in its pores, and thus by its presence has the same effect as an increase of pressure and favors chemical union of certain gases where this union is facilitated by pressure;—so the heavier atoms condense the so-called ether in the interatomic spaces, and this is done so nearly in proportion to the atomic weight that it is possible to predict the refractive index with approximation from the known atomic constitution of a substance in unit volume, though more closely from the electric properties. It is indifferent whether different atoms are chemically united or merely mixed, as far as refractive properties are concerned. Hence the ability to condense ether resides directly in the atoms. The denser "bound ether" exerts greater electric inductance on the vibrating ether which traverses it and thus retards the passage of light. Though readily thrust aside, the bound ether "particles" can not be displaced by other particles of their own order of magnitude without suffering some oscillatory disturbance; and this oscillation of the bound ether-particle is itself electro-magnetic and reacts on the electric oscillation of the light-bearing ether-particle* with its recipro-

*If we call the direction of advance the "polar" axis of the particle, any oscillation in the equatorial plane would be equally divided between transverse and parallel vibrations in respect to a meridional plane, and polarization in this case would be impossible; but a meridional oscillation may be either transverse or parallel to

cating magnetic vortex in such a way as to retard its onward progression.

Since oscillating or rotating ether not only possesses ethereal mass, but also electro-magnetic inertia, the ether, considered as an interatomic medium, is a substance which offers no resistance to the mechanical motion of atoms which do not set it rotating, or oscillating in the special luminous mode, but possesses electro-magnetic inertia for luminous motions which cause its particles to oscillate luminously. Similarly, though the advance of a broad surface composed of many molecules with their atoms and electrons can not cause a single ether-particle to rotate (because the dimensions of the two are on a totally different scale of magnitude), motions of individual electrons which are of a like order of magnitude with the ether-particles and which are not self-compensatory, are competent to impart to the ether temporary electric inertia and momentum. Thus the supposed ether, though having no inertia of its own, is bound to matter by having imposed upon it a portion of the inertia of electronic movement sufficient, at any rate, to cause some adhesion of the bound ether to material particles.

There is also some temporarily associated ether of another sort, for even in solid bodies at ordinary temperatures, there is, in addition to the thermal energy of molecular vibrations mechanically transferred, some low-temperature radiation between the molecules; and as I have shown elsewhere in treating of gaseous radiation, this internal radiation becomes of exceptional prominence and importance in the gaseous atmosphere. To this extent, at any rate, even the radiant ether may be bound to matter.

Various theorists have speculated as to whether the light-bearing ether does or does not possess mass. Clerk Maxwell has assured us that light has momentum and

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a given meridional plane. The fact of luminous polarization therefore decides that the vibration of the polarized light is a meridional oscillation. The plane of vibration may, however, be magnetically rotated in an equatorial direction as in the Kerr effect.

therefore the ether must have both mass and inertia as long as it transports light; and he even went so far as to assign to the free ether a definite density in* the ordinary sense.

Luigi d'Auria,† considering the extent of space and assuming it to be filled with ether, thought that the gravitative action of the whole ether would suffice to account for stellar motions; but since he enormously underrated the immensity of space (in confining it to a radius of about 2,000 light-years) and also misunderstood Maxwell whose ethereal density was referred to water as unity and not to air, d'Auria's computation is of no value. Maxwell's density also contained a small numerical error, as I pointed out in my "Cosmic Cycle"‡, but this is a mere bagatelle compared with the gratuitous assumptions which he has made in getting any density at all of the material sort for the interstellar medium.

G. A. Hirn, in his "Constitution de l'Espace Celeste," has given elaborate computations of the action of a resisting medium upon the motion of the planets and has demonstrated that the large material mass assigned to an interplanetary medium by Siemens and others, is an impossibility. But the conclusion that the light-bearing ether has no mass does not follow. The work of Hirn, however, proves that an ether possessing such *ethereal* mass as is required for the various ethereal functions does not fill all space in the form of a continuous medium as was formerly supposed. Whatever ethereal atmospheres there may be are strictly limited to the immediate vicinity of massive bodies. An atmosphere of free ether particles, since these have mass but not inertia, might be expected to follow a planet, but not to share in its rotation. Such an atmosphere might be somewhat more extensive than the atmosphere of air.

*In his article "Æther" in the 9th edition of the Encyclopædia Britannica.

†*Journal of the Franklin Institute,* October, 1897.

‡*American Journal of Science* [4] Vol. XIII, p. 192, 1902.

This doctrine of the limitation of ethereal atmospheres to spheres greater than the aerial, but still confined to the neighborhood of the heavenly bodies, was held by Swedenborg, was formerly peculiar to him, and probably contributed to the rejection of his theory of the luminiferous ether for nearly two hundred years, because, at least during the Nineteenth Century, it was accepted almost as an axiom that light is propagated through a *continuous* medium filling all space, and by transverse waves in this medium; and therefore, since the stars send us light, it was supposed that the luminiferous medium must extend beyond them. We need not abandon the idea of a universal interstellar atmosphere, but it is *not the atmosphere which conveys light.* The new doctrine of discrete light "quanta," though it may be non-committal as to the precise nature of the luminous entity, rejects the supposed continuity of a luminiferous medium, but harmonizes well with Swedenborg's definition and with the function which he attributed to the ethereal particle.

The revival of a modified corpuscular theory of light no longer compels us to explain the aberration of light on the undulatory theory by "the rather startling hypothesis that the luminiferous æther passes freely through the sides of the telescope and through the earth itself";* and while the meaning of the Michelson-Morley experiment has been much debated, its result is at least in harmony with the supposition that a shell of bound ether is attached to, and is carried along by every atom and thus, by summation, by the earth as a whole in its motion (though not as a rotating external atmosphere which, however, does not enter into the light equation); but this bound ether is not the ether which conveys light from outside sources. This follows also from the result of Lord Rayleigh's inquiry: "Does Motion through the Æther cause Double Refraction?"† confirmed with even more delicate precau-

*G. G. Stokes, *Philosophical Magazine,* [3] Vol. XXVII, p. 9, July, 1845.

†*Philosophical Magazine,* [6] Vol. IV, p. 678, December, 1902.

tions by D. B. Brace.* These experiments show that the ether concerned in refraction is bound to the earth and travels with it through space.

As Stokes pointed out in the above paper, the adoption of a corpuscular theory of light makes the aberration of light a very simple thing, while the hypothesis of luminous transverse vibrations in a quasi-solid and yet fluid medium, puts a heavy strain on our credulity.

Foucault's experiment which showed that light travels more slowly through transparent bodies of greater density, than it does through bodies of feeble density, demonstrated that the density of the included ether must vary through a considerable range according as it is associated with dense or with rarefied matter. This "density of the ether," however, does not refer to that of the particles themselves. These may be not only elastic, but expansile and contractile, though through a very minute range. As light-quanta in free space, they presumably have the same size as electrons, according to the hypothesis of their origin which has been presented in this paper, though the electron is rendered rigid by its rapid axial rotation, while the non-rotating ether is yielding.

Fessenden, assuming that the electronic charges are the sole cause of the mass, and their motions, of the inertia of matter, calculates from J. J. Thomson's formula for the electrically produced inertia of a charged sphere, that the electron is "about $\frac{3}{4} \times 10^{-13}$ cms.† in diameter. The ionic equivalent being about $4\ (\pm 1) \times 10^{-10}$ e. s. units [now more accurately fixed by Millikan at $e = 4.774\ (\pm .005) \times 10^{-10}$] we find the electrostatic tension and pressure at the surface of the corpuscle, about $2 \times 10^{32}$ dynes."‡ The revised measurement of the electron's radius makes this more nearly $10^{33}$ dynes. With this relatively enormous pressure

*_Philosophical Magazine,_ [6] Vol. VII, p. 317, April, 1904.

†J. J. Thomson gives for the radius of an electron "about $10^{-13}$ cm." (Conduction of Electricity through Gases. 2d Edn., p. 655). Millikan (The Electron, p. 251) gets for this radius, $1.9 \times 10^{-13}$ cm.

‡_Science,_ N. S., Vol. XII, p. 743, November 16, 1900.

at the surface of an electron, it is necessary that the volume-elasticity shall be as great as $10^{73}$, if the electron is not to collapse entirely; and this represents the electronic volume-elasticity *resulting from the elasticity of the aura.* It is by virtue of this wonderful, almost infinite elasticity that the aura is able to vibrate gravitationally with a periodicity comparable to that of light, through space of galactic dimensions.

The force required to produce the electric condensation at the surface of the electron must be balanced by the equal internal spring of the electron's volume-elasticity. The numerical ratio of volume to surface being that of the cube to the square, and since the surface of an electron is about $10^{-25}$ sq. cm., we have approximately

$$\text{volume-elasticity of electron} = \frac{(\text{surface pressure})^{3/2}}{\text{surface of electron}} = \frac{(10^{32})^{3/2}}{10^{-25}} = 10^{73}.$$

Professor Fessenden suggests that the size of an electron is determined by the fact that the breaking strain of the ether is reached at this point, so that any further electric condensation is impossible. I would also suggest that probably the rotation of the electron at its surface boundary attains the speed of light, and that this is why when the electron is stript of its superficial layer of ether, the latter is flung off with the same speed. Also that the velocity of electronic rotation is the same at all points of the surface of the particle, so that the angular velocity increases from the equator to the poles, being

$$\frac{2.999\times10^{10}}{2\pi\times1.9\times10^{-13}} = 1.660\times10^{22} \text{ revolutions per second}$$

at the equator, if we adopt Millikan's value of the radius of the electron. This is about 1,000 times as great as the frequency of the characteristic vibrations of the lighter atoms. Hence the angular velocity of the orbital revolutions of these electrons is presumably less than that of their rotations.

The configuration of this superficial electronic motion is similar to that which Swedenborg assigns to his elementary vortical particles (mentioned *ante* p. 530). An example of a particular case of such motion may be seen in my notes to the new English edition of the *Principia.** In his doctrine of forms Swedenborg describes a fifth natural form, superior to the vortical, "by which one thing regards another as well as itself, nor is there anything but what consults the general strength and concord."† On the lowest plane of nature, this form exhibits itself in the gravitational wave by which each particle is united and consociated with all the particles in its galactic cell. Thence comes the interaction and universality of natural law. Nature is not diverse, here of one sort, but elsewhere totally different and unrelated. Nature is one and the same throughout her vast complexes, and this unity appears to require some such fundamental singularity as that of the form of motion and the size of the electrons which must everywhere be precise duplicates.

The origin of a light-quantum I conceive to be the gyroscopic uptilting and reversal of an electron, accompanied by reversal of electric sign. If the center of rotation of a gyroscope is revolved in the direction of no resistance, there is no uptilting; but revolution in the opposite direction experiences resistance which reverses the spin. Similarly, a rotating electron may be carried around an orbit and brought back to its original position without performing work; but to reverse the plane of the electron's rotation requires the expenditure of one of Planck's least quantities of energy, and this means that resistance has been encountered. The quicker the reversal, the more intense is the radiation; but the period of the vibration appears to depend on some function of the radius of the electronic orbit. The simplest supposition is that the

*Appendix A. Vol. II, Fig. 4 *a*, p. 623.

†For illustrations of this see my paper in the *New-Church Review*, Vol. XIX, p. 256.

radiant period is the same as that of the electronic revolution, but this does not necessarily follow.

Where many electrons are closely associated, it is difficult, or almost impossible to overturn a single electron without at the same time effecting a similar overturning in a multitude of others; but the few electrons whose group is denoted by the Moseley number, are relatively free. Each executes its own period, though, even here, the mutual relations of attraction and repulsion which tend to preserve stable relative positions, can not be disturbed by the misplacement of a single electron without starting a series of vibrations which give complicated line-spectra through the complex perturbations of the group. Ionization of the atom is an inevitable concomitant of the operation, that is, the radiating atom either loses or gains one or more electrons.

The adoption of the assumption that the electron represents the greatest possible condensation of electric force, and that there is only one kind of electron, along with Fessenden's conception that its size (and therefore its electric charge) is conditioned by the breaking strain of the ether, leads readily to my thesis that the electron has a rotation and a peculiar form of vortical motion similar to Swedenborg's elementary particle, and furnishes a reason why it should have this peculiar form. In fact, no other form would fit the demand that the surface shall everywhere have the rotary velocity which is fundamental in the physics of the ether and definitive of the relation between electrostatics and electromagnetics. My further proviso that an ethereal electronic sheath is cast off under shock at the moment of reversal of electric sign, which reversal is the origin of the reciprocating magnetic field of the luminous particle, and that the sheath becomes an ether-particle having the same significant rectilinear velocity as the circulatory velocity of the electron's surface, also accounts for the fixed value of the energy-constant, equivalent to the light-quantum, and defines it as the energy required to overturn and change the sign of an electron.

The same is in perfect agreement with, and satisfactorily interprets the well known law that "positive and negative electrical charges always appear simultaneously and in exactly equal amounts"; for if positive and negative electricity are but two different aspects of one and the same electric unit, the separation of a pair of electrons must inevitably give equal and opposite electrical charges.

Though not expressed in identical terms, my supposition that Planck's least quantum of energy represents the resistance which an electron offers to a gyroscopic uptilting with reversal of electric sign, agrees in a general way with Fessenden's hypothesis that Planck's *"h"* represents a gyroscopic reversal of vorticity.*

Swedenborg had the idea of "small corpuscles which float in the ether and continually issue from the hard body; thus the ether is urged into a whirling motion at a distance from its body, and this causes light, and to a certain degree, electricity. For no bodies exist which are not in some way or other penetrated by the ether."† Though somewhat vaguely stated, if the "whirling motion" is thought of as a vortex filament in the *magnetic* medium, and the "corpuscles" as Thomsonian corpuscles, or electrons, this corresponds to the present conception of a static electrical charge on the surface of a "hard body" with its attendant Faraday "lines of force." Swedenborg's version, that "in order for anything to be electric and attract very light bodies, a certain circular motion is necessary in the ether," also accords with Sir J. J. Thomson's interpretation of an electric line of force, namely, that electric attraction is to be ascribed to the tendency of vortex filaments in an intervening medium to shorten themselves.

Benjamin Franklin, according to Millikan ("The Electron," p. 15), was the first to express his belief in the existence of a definite electrical particle, where he says: "The electrical matter consists of particles extremely subtle,

*R. A. Fessenden on "Gyroscopic Quanta," *Science,* N. S., Vol. XXXIX, p. 533, April 10, 1914.

†*Principia,* new English edition, Vol. II, p. 221.

since it can permeate common matter, even the densest, with such freedom and ease as not to receive any appreciable resistance." I have not been able to verify this quotation in any work by Franklin to which I have access. In his note on "Protection from Lightning," written at Paris in September, 1767, Franklin says: "The matter of lightning, or of electricity, is an extreme subtle fluid, penetrating other bodies, and subsisting in them equally diffused." This says nothing about electric particles.

Swedenborg, at any rate, declared that the light-bearing ether was made of corpuscles and associated them in an indefinite way with certain other "corpuscles" which somehow were connected with electricity. This is exceedingly vague, but in my view it contains an adumbration of the truth. Meanwhile, in the gradual dawn of the scientific day, Swedenborg's "corpuscles" and Franklin's particles of "electric matter," more subtle than common matter, have become the "electrons" of Johnstone Stoney, and the "corpuscles" of J. J. Thomson; and at the hands of the latter investigator vague hypothesis has given way to experimental demonstration and exact quantitative measurement.

*Is Entropy always One-Sided?*—For the last half century it has been recognized that a certain sum total of energy may be divided into two parts, namely, the free or available energy, and the entropy; and that the available energy of sun or earth is continually diminishing, while more and more of energy escapes into the aura, there to be stored up as entropy which, according to Clausius, is a continually increasing quantity tending to a maximum, while the free energy of every material configuration either remains the same, or diminishes. It can in no wise be increased by human effort.

The thermal mechanism of matter has been likened to a clock which is slowly running down; but as Sir Oliver Lodge has said: "It would seem as if the second law of thermodynamics must be somewhere disobeyed—at least if the age of the universe is both ways infinite—else the final consummation would have already arrived." This

dilemma has been considered in my paper: "What becomes of the Light of the Stars?"* and I think it is now fairly certain that matter is gradually destroyed and converted into ethereal energy of radiation, which, in turn, is gradually absorbed as it passes through the universal medium, or aura, again originating matter in its incipient forms.

We have then to recognize a reversal of the original entropy proposition, namely, a building-up at this stage, in place of a tearing-down; for how would it be possible for the universe to endure unless both operations were actual? We may admit that in the part of the universe in which we are placed, the tearing-down operation is going on; but it follows on any rational supposition that there must be other parts of the universe where the building-up of a renewed system takes place, where the first rudiments of matter are coalescing and developing into gaseous atoms and molecules, or into meteoritic crystals and are aggregating into nebulæ, stars, and groups of stars, star-clusters and galaxies.

*Gravitational Relationships.*—This is not the place to discuss at length the origin of matter, but something must be said concerning the gravitational fields of the electrons and ether-particles, which there is reason to suppose are limited to a single galactic cell.† Lodge computes that if there could be substituted for the gravitational pull of the sun which holds the earth in its orbit, an elastic pull through steel rods and within their breaking strength, it would take "a million million round rods or pillars each thirty feet in diameter" to stand the strain.‡ This strain is not carried by a narrow beam of aura intervening between the two bodies, but is the resultant of the interaction of fields of force which fill an entire galactic cell. Though seemingly impalpable, the aura is stronger than steel, but this strength results from its intimate connection with an infinite source

**Popular Science Monthly,* Vol. LXXXII, p. 289, March, 1913.

†See my paper: "On a Possible Limit to Gravitation," Publications of the American Astronomical Society, Vol. III, p. 335.

‡"The Ether of Space," p. 128.

of energy which is spiritual. So does the invisible spirit control the body; and even so public opinion, a seemingly intangible thing, is stronger than the most powerful autocrat, and in the end will prevail. Because of the universal relationships of the aura, it has the strength of the many in one; and the wonderful thing about the electron, considered as the gravitational unit, is that through its gravitational field of force it is everywhere present (at least within the boundaries of its own aural cell) and receives into itself an impulse from and an impress of all that transpires in a vast galactic environment.

The electrons are like little organisms, or least hearts, whose synchronous systole and diastole make the life of the universe, perpetually receiving and transmitting energy from an inexhaustible source. The aura is the "fundamental substance." As Sir Oliver Lodge says of it in his searching analysis: "It cannot really *be* ordinary matter, because ordinary matter is definitely differentiated from it, and is presumably composed of it; but the inertia of ordinary matter, however it be electrically or magnetically explained, must in the last resort depend on something parentally akin to inertia in the fundamental substance which fills space."*

At the center of each aural cell is a galactic nucleus from which issue either two spiral streams of stars, or else concentric spheres of stars with but little spiral structure.

*Galactic Dimensions.*—In regard to the actual status of the galaxies Mr. Gore has shown,† and I have shown independently,‡ that the nebula in *Andromeda* must be an object of truly galactic dimensions. On the supposition that the nova which appeared near the center of the nebula in 1885 had an absolute brightness equal to that of *Nova Persei* 1901, I found that the nebula must be at least at a distance of 1600 light-years. If the star in the nebula had an absolute brightness of the same order as that of Tycho

*"The Ether of Space," p. 135.

†T. Ellard Gore in *Knowledge,* N. S., Vol. 6, p. 247, July, 1909.

‡In *Astronomische Nachrichten,* Nr. 4536.

Brahe's star, it may have been still more massive and something like five times as far away as the first estimate, or at 8,000 light-years; but anything brighter than this, or any larger distance seems improbable, for *Nova Persei* was itself an object of phenomenal size, for which (in *Astronomische Nachrichten,* Nr. 3771) I deduced a mass 1149 times that of the sun. Mr. Curtis gets 10,000 light-years as an average value for the distance of certain white nebulæ not more than one-tenth of the angular diameter of the great *Andromeda* nebula.* If these objects have approximately the same real size, this would agree fairly with my first value; but my second value gives dimensions to the nebula which are more nearly comparable with those of our own Galaxy. If all of the galaxies, including our own, have somewhat similar real diameters, the Curtis nebulæ should be more nearly 80,000 light-years distant, and this seems to me a very reasonable assumption.

Admitting that the white nebulæ are galaxies,† or somewhat widely separated aggregations of double spiral form, composed of both stars and nebulous material, and in some cases (as in N. G. C. 4594 and 5746) with annular annexes of dark meteoritic material, it becomes of interest to ask whether gravitation also holds sway from one galaxy to another, or whether there is a limit to the extent of the gravitational field around a given galaxy.

*Galactic Distribution and Gravitational Properties Which May be Inferred Therefrom.*—Considering that the parallax of the nearest star is almost one second of arc, if we represent the disk of a star 1,000,000 km. in diameter by a little circle of 1 mm., we should have to place a similar dot representing the next nearest star at a distance of $(92.9 \times 206{,}265)/10^6$, or about 192 km. away; and granting that there may be regions in the Milky Way where the star-density is 1,000 times as great as in our neighborhood, yet

**Publications of the Astronomical Society of the Pacific,* Vol. XXVII, p. 218, 1915.

†As is indicated in my statistical study in *Astronomische Nachrichten,* Nr. 4536.

even there the dots would be almost 20 km. apart. This gives a startling picture of the sparsity of stellar material, and affords very little ground for the supposition that the lucid stars owe their high temperature to collisions with other stars, since the chances of their meeting are almost infinitesimal.

On the other hand, if we let a millimeter dot stand for a galaxy, neighboring galaxies will be represented by similar dots sprinkled only a few centimeters apart; and since these objects have velocities of upwards of 1,000 km. per sec., frequent collisions are inevitable unless there are mutual repulsions which develop upon arriving at too close proximity. This result might, however, be produced in another way, provided gravitational attraction by which we assume the stellar movements are given, is not universal, but is limited in its action to definite volumes around each galactic center, within which gravity is controlled by definitely limited currents of the aura. In fact, the great velocities which are exhibited by certain of the white nebulæ do not necessarily imply that the motions have been imparted by the attraction of masses enormously greater than that of our Galaxy. The entire field of gravitational potential energy belonging to a given galaxy being borne by a limiting volume of surrounding aura, we may presume that if this volume of aura has a motion of its own, the system of enclosed material particles will necessarily follow. The galactic multitude will be carried along as if it were so much floating material borne on a supporting current of the universal medium to which each particle is intimately attached by its very constitution, though the cause of the motion is not to be sought by pressure in currents of immediately juxtaposed aura, but in more extensive aural currents, with which the matter is connected through fields of force. Moreover, as each portion of aura, attendant upon a given galaxy, constitutes, as it were, a single compartment, or cell, in a great multi-galactic organism, while it is conceivable that occasionally a fragment of aura with its enclosed matter may be torn off from a given cell, and

may invade a neighboring cell, we might rather anticipate that, as a rule, the individual compartments will retain their individuality. In general, an entire block of aura with its contained galaxy will not penetrate a neighboring block as one mass, but if it must move in that direction, it will do so by thrusting the other to one side. Except for certain gaseous nebulæ of bizarre forms which appear to be entangled among stellar masses belonging to our own Galaxy, the other, or white nebulæ, as a rule, exhibit a general similarity of type; and in only a very few cases is there any appearance whatever of that reckless disarray which might be charged to interpenetrating or colliding galaxies. I think we may infer that in spite of what is geometrically a very close proximity, these galactic masses, while moving among each other freely, do not collide; and if occasionally a fragment of the mass is torn off and sent far afield, together with its enclosed matter, there is produced at most only a lone wandering star, moving with the velocity of the original fragment, which may for a while thread the intergalactic spaces, or even pass through foreign galaxies as a "run-away star," but which will eventually be subdued by the persistent lagging of its attached aura, just as the relics of a tornado go on whirling for a while, but are at last absorbed in the more general movements of the atmosphere.

We are thus led to look upon the galaxies as local knots of aggregation, separated by considerable spaces, but not by spaces which are enormous compared with the galactic diameters; and these intermediate spaces need not be wholly devoid of stars. It has been surmised that some of the faintest stars shown on photographic plates may be at distances of something like 50,000 light-years. This is possible, but if so far away, it is improbable that these stars have any connection with our Galaxy whose condensations occupy a much smaller space.*

*As is shown in my paper: "On Stellar and Nebular Distances," *Knowledge*, Vol. XXXV, No. 530, September, 1912, pages 329-332; and No. 531, October, 1912, pages 373-376.

*Pulsations and Revolutions of Electrons in the Atom.*—If the pulsation of the electron involves an elastic reciprocating vibration between the whole vast body of aura in an aural "cell" reacting upon the elastic resistance of the rotating aura circumscribed by the surface of an electron, the superficial condensation need not be great, but at any rate the interior resilience must be enormous. In fact, we should infer as much from the wholly independent result obtained by Fessenden for the pressure at the surface of an electron. The atoms in their most condensed form in liquids and solids have equally an enormous interior resistance and are practically incompressible. This property will have to be referred back to the great resistance to pressure of the constituent electrons.

*The Pulsating Electron and Its Relation to the Universe.*—According to the experiments of Bjerknes with pulsating spheres, if the results are applicable to gravitation, since negative gravitation is unknown, it is necessary that all of the pulsators shall pulsate synchronously with identical periods and phases. The gravitational pulsation must therefore be the unique origin of time and its most fundamental expression. It also constitutes a most amazing evidence of the absolute unity of the created universe. Hicks remarks on this point: "All we have to suppose is that atoms pulsate with a constant period, and that none have phases differing by more than 90°, or that if such once existed they have been eliminated." No suggestion has been offered, however, as to any means by which this elimination can be effected.

Now in spite of an infinite diversity, there is in the universe a unity which suggests a consistent plan and universal correlation of parts. Spiritual philosophy attributes this unity to the Oneness of a divine Creator. If the synchronous pulsations of the electrons can be demonstrated, it will be the nearest approach that science has ever made to the acknowledgment by the magicians of Egypt, the very dust having become alive: "This is the finger of God" (Exodus, viii, 19). Verily, the mystery of the infinitely

little is as overwhelming as that of the outstretched heavens.

Hicks says: "If the theory offered is the true one for the explanation of gravitation it would be possible to have celestial systems, the parts of which in each would obey the law of gravitation, but which would not influence each other, or would repel each other." Evidence has now been adduced which seems to me powerful in confirmation of this conception. The relative crowding of the galaxies is so great that it argues a mutual repulsion between these larger parts in a system of another order.

Various investigations of the pulsatory gravitative hypothesis have been made, notably those by the mathematicians, Hicks, Burton, and Leahy. In these studies it has been found necessary to assume the existence of points which are sources or sinks of fluid motion. Swedenborg also predicated the beginnings of the universe from "points" which are centers of "conatus," which may perhaps be translated "energy." But however permissible the assumption of these "sinks" and "sources" may be as mathematical devices, it is impossible to conceive of them as actually existent, except as the outcome of a hyper-space of whose reality several eminent mathematicians have speculated, and for which even a semblance of experimental evidence has been given by Zöllner in his "Transcendental Physics." The existence of properties which transcend those of matter and tridimensional space is forced upon our attention whenever we approach the boundaries of the material universe.

While the enormous velocity of gravitation indicates that the transmitting medium is almost incompressible, the atom and the electron must be regarded as definitely limited volumes within which a diminution of the "density" of the aura arises through the centrifugal force of a rapid rotation. Burton assumes that "the nucleus of an electron, instead of being vacuous, is merely a region of somewhat diminished density. . . . This assumption as to the nature of the electronic nucleus is admittedly gratuitous, but apart

from the difficulty regarding mobility which it was designed to remove, it has the advantage of greatly simplifying the dynamics of the problem proposed" (*Philosophical Magazine,* [6], Vol. XVII, p. 74, 1909). By admitting the existence of local variations of density in a nearly incompressible and highly elastic medium, the transfer of such centers of density-variation becomes comprehensible, and likewise the interaction of atomic pulsations may be grasped.

In order that a mass of matter, that is, a partial vacuity in the aura, may move from position *a* to position *b,* there must be an inflow of aura at *a* and an outflow at *b,* which requires that there shall be a gradient of pressure in the aura between *a* and *b,* and that work shall be performed by the aura at the expense of its potential energy.

Mr. A. H. Leahy has urged an objection against the theory we are considering, and in regard to the proposition "that all atoms are pulsating in phases not differing from one another by more than a quarter period, and that the intervening medium is an incompressible fluid" he says: "If this were the case, the law of universal attraction according to the law of the inverse squares would follow; but unless the medium is supposed to be absolutely incompressible, in which case all pulsations would be instantaneously diffused throughout space, there would on this theory be repulsion between bodies at distances greater than a quarter wave-length, and bodies would at certain distances repel one another, which is contrary to observation."* Since in the present paper, evidence is adduced showing that presumably bodies of galactic magnitude, and separated by intergalactic distances, do repel each other, we have only to predicate of the gravitational quarter-wave a length of the order of the radius of an aural cell, and we shall have a theory of pulsating matter which accounts for both the atom and the galaxy as necessarily interrelated parts. Thus in the light of the new evidence,

**Transactions Cambridge Philosophical Society,* Vol. XIV. p. 61, 1889.

the supposed incompatibility between observation and theory becomes, on the contrary, a powerful argument in favor of the new theory.

As to the direction of propagation of the gravitational wave, if the direction is strictly radial, it is necessary to suppose that the wave is reflected directly back upon itself at the remote boundary of the cell; or else we must presume that the radial direction is eventually diverted into a circulatory path. The latter accords better with magnetic analogies. In neither the magnetic nor the gravitative fields is there any direct flow of the medium along lines of force as conditioning the potential; but conditions of magnetic polarization, or of pressure strain, are involved, either of them following lines controlled by the peculiar properties of the organ of transmission. Since equal numbers of electrons, having by their positions and rotations the properties of positive and negative electricity, are associated together in the atom, it may be proper to consider the gravitational unit as a pair of electrons, each pair constituting an electric doublet. The immediate electric attractions of the components of the doublet being thus very nearly satisfied, gravitation becomes a secondary residual effect of relatively very inconsiderable importance, compared with the major electrical forces from which the inner energy of the atom springs. Even if independent sources must be assigned to the gravitational and the electrical effects, the latter being especially manifested in chemical affinity, nevertheless, the two are so intimately associated in the atom that they can not be entirely divorced. On the whole, however, it seems more reasonable to attribute cohesion to the attraction of such electric doublets, but to assign gravitational attraction to the interaction of the pressure fields of pulsating electronic rings.

*"Bound Ether."*—It is now pertinent to explain my conception of the "bound ether" more fully. In the first place, by "ether" in the passage quoted from Sir J. J. Thomson, is not to be understood the specially organized entity which conveys light, but a condensation of the universal aura in

the immediate vicinity of matter, which is governed by the fourth-power law appropriate to the fundamental magnetic substance; and it would perhaps be permissible to call it bound *aura,* rather than "bound ether," though if it is desired to look upon the "atmospheric" sheath of the electron as a sort of attached particle which, when detached, becomes an ether-particle, it is also permissible to do that. The ether which conveys light, however, is not so governed or hampered in its progress through interstellar space, but, like the electrons, it is free, corpuscular, and possesses radiant energy which diminishes with the inverse square of the distance as it moves onward with the speed of light, simply by spreading its field of force over a wider area. Inherently, the energy of the ether-particle does not change until it is ready to be reabsorbed, either by matter, or by the universal aura in the reconstitution of matter in its incipient nebular form.

The rays of light are not deflected by passing through the bound ether attached to matter, because they readily penetrate this ether; but they are *retarded* by it through electromagnetic forces developed in the medium. Thus aberration of light is entirely independent of the bound ether, nor can the rotation of a mass of matter impart a like rotation to the aura. The attached ether moves with its attracting matter from one locality to another. This moving attached ether accompanying a transparent body in its motion does not carry with it, control, or push aside any radiant ether which may enter it by the crude mode of a bodily displacement. Yet in a more subtle way, through induced vibrations and the drag which they impose upon the passing rays, the bound ether, whether quiescent or moving (and independently of its state of relative motion or rest) does exert a retarding influence on the passing radiant ether, but one which is determined by the density and electro-magnetic state, and not by the motion of the bound ether. Thence comes refraction.

*Is there a More Extensive Atmosphere of Ether Attached to the Earth?*—The argument of Sir J. J. Thomson, noted

above, which limits the extent of the bound ether shell (consisting of bound aura) to the immediate vicinity of matter, is conclusive as regards an *electronic* atmosphere. Swedenborg, however, imagined that there might be atmospheres of ether encompassing the heavenly bodies and much more extensive than the aerial atmospheres, but also everywhere penetrating between the grosser particles of solid matter. In his futile attempt to improve the Cartesian vortical scheme for explaining the planetary motions, he at first ascribed their cause to the interaction of vortices in these extended spheres of *ether,* though distinguishing the ether from a universal interstellar atmosphere consisting of still finer particles. After explaining that the earth was thrown off from the sun and at first moved near the solar surface and performed "its axillary revolutions more rapidly than it does at a farther distance from the sun, where a considerable portion of it is consumed in the formation of ether, air, water and terrestrial material,"* Swedenborg proceeds† to develop this theory. The correct translation here is a matter of some importance. Clissold's English translation conveys a wrong impression.‡ Rightly rendered, the text states that the earth, moving among the elementary particles which surround the sun as a medium and fill the whole space of the solar system to the outermost planet, sets in motion, or drives (*agat*) a vortex of its own, which in the early stages of the earth's development was large because the earth then moved more rapidly, and a rapidly moving body can drive a larger vortex than a body which moves slowly. Also a planet of greater mass draws, or retains (*trahat*) a larger vortex, because "the impetus and momentum (*pondus*) are compounded of the mass

**Principia,* Part III, Chap. XI, n. 2.

†*Op. cit.,* n. 4.

‡Compare the original: *"Principia Rerum Naturalium sive Novorum Tentaminum Phænomena Mundi Elementaris Philosophice Explicanda,"* of which a very carefully edited edition has recently been brought out by the Swedish Royal Academy of Sciences in *"Emanuel Swedenborg Opera quædam aut inedita aut absoleta de Rebus Naturalibus,"* Vol. II, Cosmologica. Stockholm: 1908.

multiplied into the velocity." This language is applicable to and consistent with no other conception than that of a rotating sphere of bound ether attached to the earth and retained by ethereal friction. Swedenborg supposed that a similar, but immensely greater sphere of bound ether surrounds the sun, its volume having some relation to the *mass* of that body. Since the lesser volume moves in the greater, the two necessarily react.* It was natural to inquire whether the reaction of these vast volumes of bound ether might not explain the planetary motions. The conception, though evidently suggested by the vortical theory of Des Cartes, is a great improvement on the latter in some respects and much more subtle; but it can not be admitted. The phenomenon, if it were possible, would have an analogy to the invisible support of a soaring bird whose momentum is transferred through aerial viscosity to an immense volume of air, and the weight of the bird by innumerable intermediates rests upon a wide expanse of air and eventually upon an equally wide surface of the earth.† It would be inconceivable that a current of ether, circulating around the sun and of no greater section than the earth's, should exercise any immediate directive influence on the earth's motion; but it was plausible that the interaction of immense volumes of ether might bind together their respective centers through ethereal viscosity. Swedenborg's design of a flying machine shows that his thoughts had been directed to the mechanism of flight and that he had grasped its essential principles. Here, however, analogy failed. The volumes of bound ether accompanying sun and planets, if retained by friction, will be conditioned by the areas and the square of the velocities of the frictional surfaces. Hence, since the sun's equatorial velocity of rotation is only 4 1/3 times that of the earth and 1/6 of Jupiter's, the sphere of bound ether surrounding the sun, if it were thus retained, could

*As shown, *Op. cit.*, n. 5.

†See my paper on "The Rôle of Viscosity in Air Support of a Moving Aeroplane," *Technology Quarterly*, Vol. XXI, p. 490, Dec., 1908.

not extend much farther than that of some of the planets. The supposed interaction of the solar and planetary vortices simply does not exist. When it is recognized that a deep layer of bound ether can not be held by friction, the conception of extensive ethereal atmospheres and of their interaction *as a source of gravity* must be abandoned; but the germ of the idea of gravity conceived as an interaction of interpenetrating fields of force in *one* universal atmosphere is contained in these early vortical theories. Whether there may be an earthly atmosphere of free ether-particles which do not move with the velocity of light, but remain at rest in respect to the earth and therefore are not like ordinary ether, and which outreach the aerial atmosphere, and what the function of such an atmosphere may be, must be left undecided; but the functions are not gravitational. If there be such an atmosphere, it is perhaps the physical basis of exterior thought, which may be said to be "in space," and especially of that telepathic thought which is received by harmoniously attuned instruments.

Later on, this theory of gravity appears to have been given up. Its author still holds to the discontinuity of the ether and its existence as a distinct, though not a universal atmosphere; but he assigns the gravitational rôle to a more subtle atmosphere which extends throughout the celestial spaces: "The three natural atmospheres originating from the sun of the world, are the purer ether, which is universal, and from which is all gravity; the middle ether which makes a vortex about the planets, in which also is light, in which are the satellites, and from which comes magnetism; and the ultimate ether which is the air." This conclusion, though not reached until near the end of his life and not published until after his death, was not explained at length; but it seems to have been deliberately and carefully thought out, and it is in several respects in accordance with present ideas. If Thomson is right, the sphere of bound ether can extend little farther than the air, and can not include the satellites, since it must not be confounded with the planet's magnetic field.

In an intermediate stage of his thought, Swedenborg considered the possibility of *four* atmospheres, two of them, respectively assigned to gravitational and magnetic activities, being described as universal, but distinct. In his last view, he allows the ether to exercise both electric and magnetic functions and omits the purely magnetic atmosphere. This is in accordance with the salutary rule that it is undesirable to multiply agents where a single one is competent to fill several offices; and a while ago a similar dual, or "electro-magnetic" wave-theory in a single "universal" ether was in vogue. But today, in view of the greater penetrative power of the magnetic field, and the decidedly electrical affinities of the ether, it is in order to assign the dual function of both gravitational and magnetic activity to the universal atmosphere, while grouping electricity and ether together as being two species of an entity always most intimately associated with matter, save when in transit from one part of space to another after having been ejected from its original material source. Both the free electron and the vibrant ether-corpuscle, the one in the lightning-flash, the other in the sunbeam, have been violently disrupted from their association with matter and sent speeding through space; but they had previously existed *in* matter, and, indeed, are its originating constituents. In a word, all matter may be said to be formed out of light in the depths of space.

Sir Isaac Newton formed, but did not publish, a broad general conception which is somewhat allied to the theory presented in my paper: "What becomes of the Light of the Stars?" He thought that there must be some sort of interstellar atmosphere of an attenuated substance, the "food of the sun and planets. . . . Thus perhaps the whole frame of nature may be nothing but various contextures of some certain ætherial spirits or vapors, condensed as it were by precipitation";* but this substance was not our so-called ether, nor did he attempt to define either the

*Newton's Letters, etc. *Philosophical Mag.* (3) Vol. XXIX, p. 190, 1846.

nature or the activities of this universal medium. His "light-corpuscles" were in no sense the components of a universal atmosphere.

Swedenborg went much farther and labored strenuously at the herculean task of devising a system of interrelated media whose particles should be constituted on mechanical principles, while answering at the same time as a basis for various physical forces. Mathematically, he was poorly equipped for the solution of the problem, but as a philosopher he had no superior, and some of his results are in extraordinary agreement with recent scientific discoveries. Such are his ascription of luminous and electric functions to the ether, and his teaching that the ether is not the same as the interstellar atmosphere; and though he was on a wrong track in supposing that gravity results from the interplay of limited vortices of ether attached to sun and planets, he approached the truth in another way; for the electron which is so closely related to the ether, is now seen to be the first gravitational unit; and even the idea that gravity is produced by the mutual pressure of interpenetrating vortices has a foundation if the theory be transferred from the ether to the aura, or to that "purer ether" of the preceding quotation, and if the vortices are given galactic dimensions. In fact, though I arrived at my conclusion in another way, I now see that eventually Swedenborg probably reached a somewhat similar general conception (in the posthumous passage already quoted).

Professor R. W. Brown* concludes that Swedenborg was probably misled into his error of supposing that there are solar and planetary ethereal vortices of opposite sorts which act and react, through his having noticed that the satellites move faster than the surfaces of their planets, but that the planets revolve in their orbits more slowly than the sun's superficial rotational velocity. Instead of attributing this fact to the action of two kinds of vortices, one moving swiftest at the circumference, the other swift-

*In *The Journal of Education,* published at Bryn Athyn, Pa., Vol. XV, p. 148, April, 1916.

est at the center, it is more reasonable to see in this a reminiscence of the past history of these bodies, and to infer that the planets have developed from the sun successively, or from within, and show their relation to the central body of their parent and to his waning powers in this way; but that the satellites have come from without, thus by capture, and exhibit a wholly different relation.

In further elucidation of this subject, may be mentioned a passage from Swedenborg's "Economy of the Soul's Kingdom" (Vol. I, n. 299): "There are three species of motion, namely: (1) *local* or translatory motion; (2) *undulatory* or modificatory motion; (3) *axillary* or central motion. There is, moreover, (4) *animatory,* or alternately expanding and contracting motion; and to this may be added (5) *conatus* or effort, which is a perpetual tendency to motion."

The separate consideration of "three species of motion," and then the addition of yet a fourth kind, indicates that the latter is thought to be peculiar, or somewhat apart from the obvious sorts of motion. This would apply precisely to the pulsating movements of the electrons from which gravitation presumably arises. These movements can never be observed directly, but must be inferred from their effects.

The final mention of a fifth species which seems to be identical with the most modern conception of what we now call "energy," leads to the recognition of a variety of hidden, interior, or "potential" movements which also have to be inferred from what they do. It is by the eye of reason that we must penetrate more deeply into the hidden recesses of nature.

Having now viewed our subject from various sides, we are in a position to say that, according to present light, the free ether consists of spherical elastic particles, while the electrons are cored vortices whose rigid surfaces are everywhere rotating with the velocity of light; that the ether, in so far as it is atmospheric, appears to consist not so much of a single atmosphere, but rather of innumerable condensations of the universal atmosphere around the electrons

from which it is thrown off in radiant emission; that the ether penetrates the structure of all material forms, but with diverse degrees of freedom according to electrical properties, and is everywhere closely associated with matter, sharing with the electrons in a gravitative pulsatory motion of its individual particles by which both are continually connected with the source of their sustenance in the universal aura, and having besides, when free, a peculiar oscillatory motion of its own; that in this way the tiny electrons are most intimately conjoined with the vast galactic spirals and like them endure for ages, while the light of the stars, though dimmed, is not extinguished after traveling for millions of years; but as light-bearer, the ether is not an atmosphere, but an emanation of discrete particles, images of vibrating electrons, involving in their inception least quanta of energy, formed out of the electronic or intra-atomic "atmospheres," and possessing innumerable varieties of specific vibrant form which reflect the electronic motions at epochal moments of perturbation and inversion, and which are accompanied by electromagnetic fields of force in the universal aura. These extended fields interpenetrate and sometimes interfere. This is an apparently simple statement, but without the discussion which precedes, it would be unintelligible.

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*May 27, 1918.*

# RECENT SWEDISH DISCUSSIONS OF SWEDENBORG. (II.)*

By Alfred H. Stroh.

REGARDED chronologically, the movement in Sweden to examine and print Swedenborg's scientific texts began with an investigation of his anatomical and physiological discoveries. As long ago as 1845, Anders Retzius, the anatomist and anthropologist, had referred to Swedenborg's *Regnum Animale* in an address given at a meeting of the Royal Swedish Academy of Sciences. In an address delivered in 1903, the son of Anders Retzius, Professor Gustaf Retzius, thus refers to his father's earlier statement:

> Swedenborg's works were not quite unknown to me. I knew that my father, the anatomist Anders Retzius, in his "History of Anatomy in the Scandinavian North", which was laid before the Swedish Academy of Sciences as long ago as 1845, and which was published by me last year [1902], had estimated Swedenborg very highly.

Professor Retzius then proceeds to quote parts of his father's remarkable testimony, and to furnish an historical statement concerning the series of events which led to the appointment of the Swedenborg Committee of the Royal Swedish Academy of Sciences in December, 1902, after the arrival of the present writer in Sweden. Several prominent men of science, namely, Professors Gustaf Retzius, Alfred G. Nathorst, Svante Arrhenius, Christian Lovén, and S. E. Henschen, constituted this Committee, having been appointed on the motion of Professor Retzius, who, together with the present writer, recorded in the Minutes of the Committee, from 1902 to 1915, the important series

*For the preliminary article with this title, see the *New-Church Review* for April, 1918, pp. 248-259.

of actions which resulted in the new edition of Swedenborg's scientific texts, *Opera de Rebus Naturalibus,* and in other publications. On the death of Professor Lovén his successor Professor Erik Mueller was appointed; and in 1915 the Committee presented its final report to the Academy of Sciences, proposing the publication of Swedenborg's scientific *Opera* in twelve volumes. Of these three have appeared (in 1907, 1908, 1911), with introductory matter by Professors Retzius, Nathorst, Arrhenius, and others, written for the series.

Returning now to the scientific literature on Swedenborg not directly connected with the Stockholm *Opera,* there have appeared from the busy pen of Professor Arrhenius two works treating cosmological questions in popular style, and incidentally referring to Swedenborg. These works have appeared in numerous editions as "Worlds in the Making," and "Man and the Universe." In both cases I enjoyed the privilege of numerous and prolonged conferences with Professor Arrhenius, whose student I became at the University of Stockholm, and whose collaboration on the Swedenborg Committee resulted in the production of numerous notes on Swedenborg's physics, chemistry, and cosmology, later translated and partly published in Vol. II. of the *Opera.* Professor Nathorst's Preface in Vol. I. of the *Opera* on Swedenborg as a Geologist has been amplified by Professor Hjalmar Sjögren's interesting contribution entitled "Remarks on Swedenborg's Manuscript 'New Ways of Discovering Metallic Veins'," a translation of which appeared in *The New Philosophy,* Oct. 1906, and in the "Scientific and Philosophical Treatises" of Swedenborg (Pt. I., pp. 71-82). The Swedish text, and Professor Sjögren's analysis, will be found in Vol. IV. of the Stockholm *Opera.* Towards the close of his discussion Sjögren says:

> The treatise by SWEDENBORG under consideration is of interest as being an instance of his tendency to generalize and bring together widely differing phenomena under one common point of view, and to explain them as the results of a common cause.

This is, to a certain extent, characteristic of the whole age in which he lived. He believes that the "effluvia" impregnate and change not only the layers of earth which cover the metallic veins, but also the plants which grow above them, by which they "derive a slight modification of color or some other change," so that an observer might hence be able to conclude as to the presence of a metallic deposit. "Since, therefore, the earth continually emits vapors and particles from what lies below, and as the ground is everywhere filled with plants, with soil, clays, moulds, and stones, colored in various ways, nothing else can result than that they become filled with such particles as have been furnished to them by the subterraneous [regions]." He even believes it possible that the "magic wand," which in the beginning he characterized as "superstition", might be explained in this manner. "It may also be that the effect of this (i. e. of the vapor emanating from subterranean ores) is [felt in] the magic wand, so that when one passes through this vapor, the joints of the fingers become lame and weak, and the 'spiritus' in the blood becomes sluggish, so that the wand needs must fall forward and show that it is now above the vein itself."

With regard to the magic wand, the present writer saw it used in the autumn of 1914 in Westrogothia, Sweden, at Mösseberg, where some workmen were digging a ditch. The wand was held in front of the operator, lying loosely in his hands at first; but presently it began to bend forward so strongly that he could not hold it back. Whatever the explanation of this curious phenomenon may be, there is no denying the fact. The constantly increasing literature on the subject has never, so far as I am aware, been satisfactorily explained either by physicists or psychologists.

Before leaving the fascinating section of Swedenborg's contributions to geology, I may refer to a discussion of the fluctuations of the water level of Lake Venner by Axel Wallén, Chief of the Hydrographical Bureau, Stockholm, 1910, in which Swedenborg's discussion is referred to, and also to Dr. Samuel E. Bring's interesting History of Trollhettan Canal, Stockholm, 1911, in which Swedenborg and Polhem are frequently referred to. In 1911 the two hundred and fiftieth anniversary of Polhem's birth was celebrated in Stockholm by a great festival, and in the large work "Christopher Polhem", Stockholm, 1911, Sweden-

borg's connection with the "Swedish Archimedes" is repeatedly mentioned. The same is true of Holger Rosman's little book on "Polhem", Stockholm, 1911. Swedenborg's fossil tree-trunk has also been discussed by Julius Schuster in the proceedings of the Academy of Sciences, Stockholm, 1910.

In an entirely unexpected quarter I found in March, 1913, in Finland, an old and a new discussion of Swedenborg's financial and economic papers. A friend in Helsingfors, Finland, Professor Palmén, presented me with a rare book, to be placed in the Library of the Academy of the New Church, entitled *Omständeligt Swar, Stockholm,* 1765, a Reply by the Finnish economist Anders Chydenius, in the discussion on the finances of Sweden which was then being carried on. At the close of this work, pp. 164-167, Swedenborg's memorial on the Balance in Trade, dated Stockholm, April 13th, 1723, is quoted, being another indication of the value which was even in Swedenborg's own lifetime placed on his scientific and financial papers in Sweden. Swedenborg's contributions in the field of national economy and finance have been discussed recently by Dr. Erik Sjöstrand, Lund, 1908, and by Dr. Georg Schauman, Helsingfors, 1910. I am indebted to the authors for copies of their publications, and hope to translate them in so far as they concern Swedenborg's contributions, together with other recent discussions of Swedenborg's early life and works.

During my absence in America in 1917 there arrived from Count Carl v. Klinckowstroem of Berlin a number of copies of his remarkable paper "Emanuel Swedenborg and the Problem of Aviation." This contribution contains a translation into German of Swedenborg's paper on the Flying Machine, together with a portrait and illustrations showing models recently made.

*Swedenborg and Philosophy.*—In attempting to place Swedenborg in his exact position in the history of philosophy the student is confronted by the great scarcity of literature in this field. One of the chief features, Sweden-

borg's cosmological theories, has indeed been widely discussed in recent times by Arrhenius, Hoppe, Tansley, Barrett, and other writers; but they have for the most part confined themselves to the history of physics, not metaphysics. The latter important field of Swedenborg's connections and influence has been little discussed hitherto except by Dr. Frank Sewall in older works, and by Professor L. F. Hite in a number of papers. The European discussion of Kant's relation to Swedenborg has been summarized and quoted by Sewall in Goerwitz's translation of "Dreams of a Spirit-Seer", London, 1900, and by Richard Adolf Hoffman, Professor in Königsberg, in a paper on "Kant and Swedenborg", Wiesbaden, 1909. The present writer has recently prepared addresses on "Swedenborg and Cartesianism" and on "Swedenborg and Kant", delivered in Heidelberg, Bologna, and Stockholm.

Swedenborg's supposed influence on the Swedish philosopher, Christopher Jacob Boström, born January 1st, 1797, died March 22nd, 1866, has been fully ventilated by my friend Hjalmar Kylén in a number of addresses and papers printed in Swedish, English, and German. It would be futile to attempt a discussion of this question, or of the unquestionable similarity of Boström's philosophical system to Swedenborg's, without first acquainting the reader to some extent with the connected history of Swedish philosophy during the nineteenth century. In order to make possible a future discussion I have received the permission of my former teacher and guide at Upsala, Professor K. R. Geijer, to issue in America my translation of his papers on "Swedish Philosophy" and on "Christopher Jacob Boström, in memoriam". But in order that the reader may in this connection have access to the latest word on Boström and Swedenborg I shall here translate pages 28-32 of a recent popular work on the philosophy of Boström, the "Swedish Plato", by Johannes Ljunghoff:

"In my opinion," says Wikner, "this philosophy [Boström's] is a faithful and complete representation in the form of thought of the Swedish people's nature," whose preponderating idealistic

disposition is shown by their inclination for a more or less deep and perceptive dream-life, the movements of which remind one of the sighing of the wind in the pine forests; at the same time there is in this inclination a desire for clearness, which easily dispenses with details, if only sufficient light may fall upon the whole . . . as if the depth of feeling immediately passed over into the clearness of abstract thought. (Concerning Humanity's Life-Questions, p. 225).

But in order to understand correctly the Swedish nature of Boström's thinking, one must further recall the religious consciousness of personality, which has without doubt characterized our people's history, and living in the love of freedom and the everlasting faith in the God of our fathers, has quite naturally also shown itself in their work on a scientific world-view. It will suffice to recall the names of such men as Samuel Grubbe, Erik Gustaf Geijer, Nils Fredrik Biberg, Benjamin Karl Henrik Höijer, and leading them all, Emanuel Swedenborg.

That Boström as a disciple followed immediately in the footsteps of Biberg and Grubbe, so far as the spirit and general direction of his philosophy are concerned, is obvious and need not be confirmed by a reference to the agreement which can be demonstrated with ease as to special points, especially in the field of practical philosophy. The connection with Höijer is more remote in substance as well as in time. On the other hand Geijer and Boström seem to have arrived independently of one another and by different paths to a view of the world and of life of an essentially similar kind, and from that standpoint Geijer was able to hail gladly the treatise "On the conceptions of religion, wisdom and virtue" in which Boström first set forth his philosophical system.[1] And this probably points, at least to some extent, to a deeper connection between them in the soul of the Swedish people.

Such an "explanation," it may have value or not, also lies near at hand as concerns the agreement which exists between Swedenborg's and Boström's doctrines, and which moreover deserves full attention. The similarity is indeed so great, that when one fixes the view on what is essential in both, one might very well say that Boström has as a thinker expressed in the form of concepts the thoughts to which Swedenborg as a seer has for the most part given the form of pictures.[2]

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[1]See Bygden's preface to the translation of the treatise mentioned (originally written in Latin).

[2]Even Kant admits, that in Swedenborg's works—in spite of everything—there reigns "a wonderful agreement with that which the finest searching of the understanding can disclose concerning a similar object." But he is himself fully convinced that this agree-

Compare for example the conception of both Boström and Swedenborg on the nature of space and time[3], on the relation of the world of sense to the world of spirit[4], on God's unchangeable goodness[5], but first and last,—as perhaps the most characteristic of all,—the significance of personality and society in the whole[6]. The principle of personality is common to both Boström and Swedenborg, and likewise the doctrine of the significance of society, with sometimes almost completely similar forms of expression in both. As when Swedenborg explains that a society appears "as a unit in the form of an angel" ("Heaven and Hell," n. 32), and that "every society is a heaven" ("Heaven and Hell," n. 51); and Boström, that "society is a personality" (Rf. II., 64) and that "all societies are churches" (Rf. II., 64); or Swedenborg: "to go out of the society is to go out of oneself or of one's life" ("Heaven and Hell," n. 49), and Boström, "Each individual has a higher, richer and more specific life, if he regards himself as a member or a moment in a human society, rather than by living a separate and isolated life outside of it" (Skf. I., 299).[7] And neither can Boström's conception of marriage and of the nature of family society—to choose still another example—be more beautifully expressed than by Swedenborg's words, that *"two consorts in heaven are not called two but one angel"* ("Heaven and Hell," n. 367)[8].

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ment with reason only depends on an accident, and is most correctly explained as a suggestive hallucination in the observer. (See *Träume eines Geistersehers,* ed. Recl., pp. 51-52.)

[3]Swedenborg's "Heaven and Hell," nos. 85, 167, 169.

[4]"Heaven and Hell," nos. 89, 104, 106, 112, 175.

[5]"Heaven and Hell," nos. 9, 545.

[6]A brief and exceedingly clear presentation of Swedenborg's view of these points is given by Kant in his work, pp. 53-59.

[7]The continuation reads: "And the more perfect the society is, of which the individual is a member, and the more truly he conceives his position within it, the more highly he regards his life and its value. Hence arises the admiration and love with which every good person embraces another who is better than himself, and his desire to become a moment in that one's higher life. Hence also comes love to brethren, fellow citizens, the authorities, the country, humanity, and finally to the Divine Spirit itself."

[8]According to Boström every true marriage is eternal as to its idea; and the marriage as appearing in time is therefore, if it be genuine, nothing else than a revelation of the *eternal* condition of life which exists by means of the two partners in God's kingdom. For "marriage has not been created by human beings, but they only let it appear here. For example, when someone tunes an instru-

Consequently—in spite of all differences in other respects—it is unavoidable to conclude that a deep spiritual kinship exists between Boström's world-view and Swedenborg's, especially because of their common principle of personality, and although any external connection between the systems is, in this case—though not altogether excluded,—still under all circumstances too small to really be mentioned, so one may well return also here to the common predisposition in the soul of the Swedish people as being a kind of ground of explanation for us, which of course does not exclude the possibility of external impulses, in the case of both Swedenborg and Boström.

What Boström means by a true marriage, is clear from the following expression among others: "Love—(must) always be the ground, out of which the family's ethos or moral life continually must develop itself" (Skf., II., 442). But "a love without respect has no ethical significance and is also not permanent" (Et., 106).

While the Swedish discussions of Swedenborg so far as the philosophers *ex professo* are concerned have hitherto been insignificant, another stream of literature which, while strictly biographical in its main scope, nevertheless is full of philosophical questions, has of late begun to appear more and more prominently. Before passing on to this department below under the caption "Biographical Discussions of Swedenborg", I may record at this point in all brevity my own experience with Swedish philosophers. Some twelve years ago I met Professor Karl Reinhold Geijer, whose papers on Swedish philosophy and Boström I am now translating. In passing I may mention that Geijer is a lineal descendant, one of the last, of the old line of Boström philosophers. On my enquiring about the philosophical atmosphere of Swedenborg's university period at Upsala some two centuries ago, the Professor mentioned the Cartesian controversy which had raged at the University just before Swedenborg's entrance in 1699. This was my first clue to the subsequent investigations in this field laid

ment, then (perhaps) he believes that he has created the harmony, but that is eternal, the connection of the tones is eternal" (Rf. II., 57, cf. 81f.—cf. Kierkegaard's *Enten-Eller,* II., p. 21, etc., and from a non-Christian standpoint the speech of Aristophanes in Plato's *Symposion*).

before the International Congresses of Philosophy at Heidelberg and Bologna in 1908 and 1911, and in fact this piece of information has later profoundly influenced by its direction the course of my philosophical studies. I still have a far greater sympathy for the period of Swedish philosophy represented by the Cartesian controversy two centuries ago, than for the Boströmian idealism of the past century. And still, it is remarkable how all lines finally meet; for the recent reaction of the younger professors in Upsala,—I may mention Professors Hägerström and Phalén, and my departed and lamented early guide Docent Hedvall,—while taking an especially strong position against Boström and idealism, have because of their critical direction, and influenced by the Marburg School, reawakened in the spirit of Natorp and Cassirer from a logical standpoint the very definitions of our ultimate conceptions in the sciences, and of the nature of space, time, substance, energy, etc., which in other ways were so profoundly discussed by Descartes and his successors, leading on the one hand to Spinoza's pantheism, on the other hand to the idealism of Leibnitz and Kant, and to that specific form of dualism or "trinalism" which is characteristic of Swedenborg. He always holds, even in his earliest works, that all movements course through cycles, returning to the point of departure; so also we find in the history of philosophy how one returns after many days to the old central questions by a new path.

*Biographical Discussions of Swedenborg*—The reader of the English biographies of Swedenborg familiar with Tafel's "Documents concerning Swedenborg", and with the works of Benjamin Worcester and George Trobridge, not to mention other smaller works which have appeared in England and America since the publication of the "Documents" some forty years ago, will be amazed to find that the largest works on Swedenborg in other languages, for instance in French by Byse, and in Swedish by Lamm and Kleen, are the only up to date discussions obtainable since the International Swedenborg Congress in London,

1910. These works have not yet been translated into English; and they have been but little reviewed as yet, although that will inevitably follow in due course.

Without repeating the information elsewhere recorded it should first be observed that while the recent Swedish biographers of the Great Swede are on the whole very favorable to Swedenborg's position as a great investigator and poet, they are distinctly non-religious and purely literary and historical, with one notable exception, that of Dr. Emil A. G. Kleen, who has produced a large book with a strong pantheistic bias fiercely attacking not only Swedenborg, but also Jesper Swedberg his father, and the Swedenborgians. This work is largely a free working over of White's large life of Swedenborg in two volumes, both as to substance and form, for Dr. Kleen greatly admires White's book. Especially has Dr. Kleen raised the old questions of Swedenborg's "Dreams", or Journal of 1743-44, and of his mental condition then and later.

Answers from the distinctly New-Church and Swedenborgian, as well as from the philosophical and literary camps, have not been lacking, although they have hitherto appeared only in the newspapers and in periodicals. Works by Pastor C. J. N. Manby in reply to Kleen's book, entitled "The Black Thread in Dr. Kleen's Biography of Swedenborg" and "The Truth about Dr. Kleen and Swedenborg," will probably appear during the year. The writer of this contribution is also at work on a new life of Swedenborg entitled "Outlines of Swedenborg's Life and Philosophy", which it is hoped will in due time appear, accompanied by a large collection of old and new "Documents concerning Swedenborg", which after all tell the fascinating story of Swedenborg's life more directly than any other evidence ever can. Swedenborg's letters, memorials, journals, etc., have been largely edited as volumes of the editor's proposed series of *Swedenborg Archives,* the first volume of which is about to leave the press at Stockholm; five additional volumes of bibliographical and documentary collections have been edited in English, and four

more exist as typewritten copies in Swedish. It is highly desirable that all of these original documents by and concerning Swedenborg be issued in the *Archives* in English, and also that the collections appear in the original languages, chiefly Swedish, at Stockholm, as a complete reply to Dr. Kleen, and as a refutation of all the incorrect and incomplete information which constantly finds its way into literature.

The corporations of the New Church have caused Swedenborg's theological manuscripts to be photographed and printed in facsimile in a magnificent edition of *Autographa,* now comprising over twenty-eight volumes in folio, with another seven contemplated in order to complete the series. The Royal Swedish Academy of Sciences has hitherto issued three large quartos of Swedenborg's scientific texts, a fourth being about to leave the press, and eight others being intended. As the war has proceeded, the difficulties in securing the all-rag high quality paper required for these two large series have gradually proved to be insurmountable, so that the printing of these works has come to a standstill; but there is nothing to prevent the continuation of the editorial work upon and serial issue of the above mentioned documentary *Swedenborg Archives.*

Alfred H. Stroh.

# A CRITICISM OF PUBLIC EDUCATION IN AMERICA.*

By B. A. Whittemore.

WE are a nation of Philistines,—"uncritical [persons], unconscious of defects and faults, living in the mire of self-contented stupidity and mediocrity" (p. xix),—at least, that is what Dr. Boris Sidis says in his little book entitled "Philistine and Genius"; but as all other occidental nations (he does not mention the oriental) fall into the same classification, we have no occasion for feeling lonesome. As "the character of a nation is moulded by the nature of its education", as "the character of society depends upon the early training of its constituent units", his estimate of us as a nation involves a scathing criticism of our educational system. Seldom has it been our lot to read such a drastic arraignment of human society as is contained in this volume, seldom, to hear such absolute condemnation of the aims and methods of our vaunted public schools and institutions of higher learning. He ends one censorious paragraph with the words,

> If in the depths of space there is some solar system inhabited by really rational beings, and if one of such beings should by some miracle happen to visit our planet, he would no doubt turn away in horror (p. 28);

and a moment later he goes on to say,

> Our educators are narrow-minded pedants. They are occupied with the dry bones of text-books, the sawdust of pedagogics, and the would-be scientific experiments of educational psychology; they are ignorant of the real vital problems of human interest, a knowledge of which goes to make the truly educated man. (P. 29.)

The goody-goody schoolma'am, the mandarin schoolmaster, the

**Philistine and Genius.* By Boris Sidis, Ph. D., M. D. Boston: Richard G. Badger. 1917. xxvii+122 pp., 12 mo. Cloth, $1.00 net.

philistine pedagogue, the pedant administrator with his business capacities, have proved themselves incompetent to deal with the education of the young. They stifle talent, they stupefy the intellect, they paralyze the will, they suppress genius, they benumb the faculties of our children. The educator, with his pseudo-scientific, pseudo-psychological pseudogogics, can only bring up a set of philistines with firm, set habits,—marionettes,—dolls. (P. 42.)

We do not know what special right Dr. Sidis has to set himself up as an authority on pedagogy beyond that evidenced in the rearing of a remarkable son, concerning whom the world has heard much. Granting the adequacy of the grounds of his assumption, let us inquire what he has to say concerning the true aims of education? His remarks on this subject are not developed at any one point in his essay, but are scattered here and there throughout it; and consequently our quotations must be fragmentary (italics as found):

The true aim of education is the development of personality as a whole. (P. 2.)

It is not the amount of knowledge that counts in true education, but originality and independence of thought. (P. 51.)

Awaken in early childhood the critical spirit of man; awaken, early in the child's life, love of knowledge, love of truth, of art and literature for their own sake, and you arouse man's genius. (P. 53.)

The most central, the most crucial part of the education of man's genius is *the knowledge, the recognition, of evil* in all its protean forms and innumerable disguises, intellectual, æsthetic and moral, such as fallacies, sophisms, ugliness, deformity, prejudices, superstition, vice and depravity. Do not be afraid to discuss these matters with the child. For the knowledge, the recognition, of evil does not only possess the virtue of immunization of the child's mind against all evil, but furnishes the main power for habit-disintegration with consequent release and control of potential reserve energy, of manifestations of human genius. (P. 64.)

Avoid routine (p. 58) . . . Cultivate variability (p. 59) . . . The important principle in education is not so much *formation* of habits as the power of their *re-formation* (p. 59) . . . *The cultivation of the power of habit-disintegration is what constitutes the proper education of man's genius* (p. 60).

*The cultivation of critical judgment and the knowledge of evil are two powerful constituents that form the antitoxin for the neu-*

*tralization of the virulent toxins produced by mental microbes,* . . . [such as] all evil fears, superstitions, prejudices and credulity. (P. 91.)

[Away, then, with all rubbishy] fairy tales, myths and deceptions about life and man, . . . meaningless imitation of jingles and gibberish, memorization of mother-goose wisdom, repetition of incomprehensible prayers and articles of creed, unintelligent aping of good manners, silly games, prejudices and superstitions and fears of the supernormal and supernatural. (Pp. 9, 10.)

The matters here condemned are largely instilled into the average child's mind in its earliest years,—that most important period in the education of the individual. On this point of early education Dr. Sidis says:

The fear of mental precocity is essentially the phobia of the inveterate philistine (p. 114) . . . Psychopathology clearly brings out the significant fact that a good start in early childhood is of the utmost consequence to the individual. Only a good education in early life can save man from the innumerable psychopathic maladies to which he is subject. The seeds of vicious habits and of criminal tendencies can be eliminated in early childhood. Early development, or what is termed "precocity," in children will not only prevent vice, crime, and disease, but will strengthen the individual along all lines, physical, mental, and moral. We should be careful not to cast the child's mind into ready-made moulds, not to subject his mind, his character, to the yoke of meaningless mannerisms and rigid formalities. We should have respect for the child's personality. We should remember that there is genius in every healthy, normal child. (P. 113.)

*Between the second and third year.* . . . It is at that critical period that we have to seize the opportunity to guide the child's formative energies in the right channels. To delay is a mistake and a wrong to the child. We can at that early period awaken a love of knowledge which will persist through life. The child will as eagerly play in the game of knowledge as he now spends the most of his energies in meaningless games and objectless, silly sports. (P. 67.)

We have quoted thus liberally from this little volume because its views, while not in accord with prevailing authorities, are largely in harmony with New-Church fundamentals. Certainly had our New-Church parents and our New-Church educators during the past generation or two observed the principles set forth in this book, the con-

dition within the Church that is the occasion for so much adverse comment concerning its health and strength would not now exist. Dr. Sidis is far from enunciating that fundamental doctrine of the New Church (Divine Providence, n. 27) which is a touch-stone for all aims and methods of all human institutions; but his efforts to advance along new paths have carried him noticeably in that direction. For if God's purpose in creation is a heaven of angels from the human race, then our aims in education should be as far as practicable those set forth by him, as amended in the light of this ideal. Our doctrine of Remains sufficiently emphasizes the great importance of early impressions and early cultivation; and surely an attribute of angelic character, with its blending of love and wisdom, is the ability to sense evil and falsity in all their multifarious manifestations. If all souls born into this world are by the Lord predestined to heaven (Arcana Cœlestia, n. 6488, True Christian Religion, n. 490), certainly it would be well if this fact were borne in mind in all our educational endeavors, so that our fundamental and daily aim should be to help our children develop into actual incipient angelhood here, instead of our thought being so bent upon fitting them for "successful" life in this world,—almost as those benighted individuals do who cherish the maxims, "one world at a time," and "this world is good enough for me." Worthy aims according to angelic standards and according to worldly standards are two very different things. Obviously during earthly life we cannot for practical reasons incline too far towards the ideal; but do we as a body give it as much consideration as we should in the education of our children?

No wonder Dr. Sidis decries the influence of "business men" upon our school boards; no wonder he sees the ghastliness everywhere produced in our educational system by the ends introduced by Mammon-worshippers; no wonder the transformation of our public schools in the interests of vocational training fills him with loathing; no wonder that he exclaims, "The slaughter of the innocents and the

sacrifice of our children to the insatiable Moloch of industry exclude us from the rank of civilized society and place us on the level of barbaric nations"!

Unfortunately Dr. Sidis does not show us a practicable way out of our educational difficulties and defects. Like all idealists he is a voice crying in the wilderness. The ideals he presents for our consideration are not practicable for immediate realization on a large scale, such as would be necessary in any transformation of the aims and methods of our public educational institutions. On a limited scale, and especially by parents having time to give personal attention to the education of their offspring, his principles are practicable; and to such we especially recommend an examination of his book. All educators, too, should familiarize themselves with it as an expression of educational ideals.

In closing we cannot help remarking about the professional conceit manifested by the author that would place the salvation of the world in the hands of the class to which he himself belongs. The passage is worth quoting:

> The cultivation of credulity, the absence of critical judgment and of recognition of evil, with consequent increase of suggestibility, make man an easy prey to all kinds of social delusions, mental epidemics, religious crazes, financial manias, and political plagues, which have been the baleful pest of aggregate humanity in all ages. The immunization of children, the development of resistance to mental germs whether moral, immoral or religious, can only be effected by the medical man with a psychological and psychopathological training. . . . The control of mental and moral life is gradually passing. . . into the hands of the medical psychopathologist. (P. 93.)

Rhetorically the book is decidedly faulty, abounding in repetition of idea involving much abusive language that is not pleasant reading.

B. A. WHITTEMORE.

# EDITORIAL DEPARTMENT

## THE NEW JERUSALEM.

And I John saw the Holy City, New Jerusalem, coming down from God out of heaven, prepared as a bride adorned for her husband.—Rev., xxi, 2.

THE New Jerusalem is, by the common consent and the common expectation of the Christian world, a new Church, the perfect and final Church. It is presented here in prophetic vision under the figure of a city, and otherwise as a bride.

It must seem strange to most people to be told that this New Church exists now upon the earth, and that they may become members of it by learning its doctrines and living the life which they teach. But, however great the surprise with which this announcement may strike one, it is easy to become convinced of its truth by a careful study of the prophesy and the symbols which give us the knowledge of this New Jerusalem.

This is a time of great expectation; men are reading the signs of a new age, and are prepared for the coming of new religious light, a more complete understanding and realization of Christianity. The conditions thus recognized and ardently welcomed are often actually described as the coming of the New Jerusalem, and are more or less connected with this prophesy; but outside of the New Church, they are not specifically interpreted in the light of the prophesy, still less in the distinct spiritual light revealed in and by the prophesy when understood in its spiritual sense. This is really the need of the hour and the means of interpreting the life and problems of the day.

We begin with the fact that this prophesy is the "Revelation of Jesus Christ," and that it is a description, both in direct

terms and in symbols, of his nature and character as the glorified Man. It was the Lord Jesus Christ glorified who said to John, "I am the Alpha and the Omega, the First and the Last"; and who laid his hand upon John, saying "Fear not, I am He that liveth and was dead, and, behold, I am alive forevermore. . . . Write the things which thou hast seen, and the things which are, and the things which shall be hereafter." It was this same Lord Jesus whom John, in the spirit, saw sitting upon the throne in heaven, and whom the heavenly hosts worshipped, saying: "Holy, holy, holy, Lord God Almighty, which was, and is, and is to come . . . who liveth forever and ever"; and also, "Thou art worthy, O Lord, to receive glory and honor and power, for Thou hast created all things." Again He was seen in the midst of the throne as the Lamb to take the Book and loose the seals thereof; whereupon the united voice of heaven was heard in the acclaim, "Worthy is the Lamb that was slain to receive power and riches and wisdom and strength and honor and glory and blessing. . . . And every creature which is in heaven, and on earth, and under the earth, and such as are in the sea, and all that are in them, heard I saying, Blessing and honor and glory and power be unto Him that sitteth upon the throne, and unto the Lamb for ever and ever." Thus we are taught that the glorified Jesus sits upon the throne of heaven, King of kings and Lord of lords, the Father Almighty and the Prince of Peace, God over all.

This is the central doctrine of the New Jerusalem; he who holds, cherishes, and lives this doctrine, is in so far a member of the New Church. But such membership implies immensely more than merely a knowledge of the verbal statement of the doctrine. We must see that the Lord's descent from on high, His work on earth among men, His glorification and ascension, are all declared and interpreted in the symbols of the Bible from beginning to end; and especially we must see in the symbols of this Book of Revelation the description of His Second Coming. His messages to the Seven Churches are meant for those who will receive Him in his Second Coming. The opening of the Seven Seals, the sounding

of the Seven Trumpets, the emptying of the Seven Vials, are the successive operations of examining and judging the states of life among men, as they are brought to light under the rule of the new truth. Under the symbols of Babylon and the Great Red Dragon, the two fundamental spiritual evils, perverted love and perverted faith, are described and their judgment set forth. This final judgment clears the way for the descent of the New Jerusalem and the Second Coming of the Lord.

This spectacular drama with its visions and symbols is the form in which the specific truth of the New Jerusalem and of the Second Coming is presented to us; and our task as New-Churchmen is to interpret it and apply it. The interpretation is to be given in terms of spiritual truth, and the application is to be made to the conduct of daily life.

It is common knowledge, familiar to Christian thought from the beginning, that the Book of Revelation depicts in symbol the "reign of Christ" and the "descent of the New Jerusalem." The Christian mind therefore has been more or less prepared for both of these events; and present conditions, especially the recent development of new religious ideas and interests, would seem to show that the Christian mind is awake to the immanence of these events. Nevertheless a deeper insight into the religious thought of the day brings to light ideas, tendencies, and movements, which are decidedly hostile to the revelation really contained in this book of Christian symbols. The tendency is away from the essence of Christianity towards a sort of humanism which is vaguely attached to the historical Christ and still preserves some of the elements of Christian experience, but which in the end will displace the Founder of Christianity with the idea of a spontaneous evolution of a human impulse under the guidance of scientific enlightenment.

It is true both in fact and in theory that Christianity as an historical development is based upon, has had its existence, vitality, and power from, the "experience of Christ"; but this experience has all the while been subject to so much false and imperfect interpretation, that the experience itself has been to a great extent vitiated, and the religious life has been thrown

back upon a semi-Christian morality, in which Christ Himself plays an increasingly subordinate part. And so the problem of the Christianity of today is to restore Christ to the position of Founder, and continual Source and Supporter; not as an exemplary man however highly endowed religiously, not even as the Son of God, co-eternal with the Father; but as the very and only God, the God revealed in the Bible and the God exhibited in history.

It is thus, as the God of heaven and earth, that Jesus Christ glorified is presented to us in the whole Bible, when spiritually understood; and especially in the visions and symbols of this his final Testament, He is presented to us as the glorified Man, completing his work of judging, re-constituting, and establishing his Church upon earth. In this work we are now sharers; our life has its deepest and fullest significance in the part we take as members of this Church, the Holy City, New Jerusalem.

The historic city of Jerusalem was the place of the Temple, where the tribes of Judah and Israel went up to worship. It was thus the Holy City, and became by virtue of this fact the symbol of the Lord's presence among men. But the Lord's presence is not merely a visible or bodily or personal presence; it is organic; it organizes and operates the life of both the individual and the collective man. Like a well-ordered city, man's life on all planes and in all combinations becomes under His organizing and operative presence an organic whole, moulded in conformity to one supreme motive and principle, the all-comprehending and all-comprehensive power of Love.

It is all too painfully obvious that the life of men, individual and collective, is at present very far from this type and model; and history brings to view no picture of a period which was substantially better. Now as ever the Lord's spirit is operating with and against the virtues and vices, the motives and the ideals, of a strangely mixed humanity. In the maze of conflicting impulses, ideas, and purposes, we are sorely perplexed. The world of humanity seems to be stricken with unparalleled darkness, confusion, and strife; we know that a crisis is upon us; the fate of the civilized world seems to be in the balance, and the issue obscure. But the pages of history point us to

other crises, other days of darkness and doubt; from these we get inspiration and light. One such crisis was the time when Greek science and philosophy collapsed under the stress of the demand for a nobler and more satisfying ideal of a complete human life, and for a more consistent and more complete idea of the meaning of the world. The darkness and perplexity, the doubt and despair, was then relieved by the light and the new life which Christianity brought. Another such time of spiritual darkness and impending ruin was the flood of paganism and naturalism which engulfed western Europe in the days of the Renaissance, and of the religious conflicts consequent upon the Protestant Reformation. Even in our day at the present moment we seem to be witnessing a life and death struggle between the evil genius of Protestantism and the forces of a Christian civilization. This view has been elaborated in the REVIEW of April, 1916, and it is not to our present purpose to pursue it further.

But here again we have evidence of the dawn of a new day; the clouds of centuries are seen to be rolling away, and the light of a new heaven is breaking through. In the middle of the eighteenth century, when skepticism and rationalism were at their height and were driven by an unheard of development of naturalistic science, the world, especially the world of scholarship, was amazed at the announcement of the Second Coming of the Lord in the spirit and in the power of a newly discovered and deeper meaning of his Holy Word. The announcement was for the most part unheeded; but evidences of its truth soon began to appear. The naturalism of the day was challenged, the triumphant sway of skepticism and rationalism was broken, and a new sense of intellectual and spiritual freedom was felt. Ideas of democracy began to flourish, and took most definite and organic form in the Constitution and Government of the United States. Religious freedom received a new and more enlightened impulse, and religious controversy became more temperate and more tolerant. Long-standing fundamental religious ideas began to be abandoned, and new and more-enlightened views of man and God were entertained: the old idea and doctrine of infant

damnation was denied, and the salvation of all infants, whether born within or without the Church, whether Christian or heathen, was declared; the monstrous idea and doctrine of a tri-personal God was repudiated, and the sole Divinity of the Lord Jesus Christ was asserted; that enormous perversion of the Christian faith, the "doctrine of faith alone," that a man is saved by faith alone rather than by amendment of life, was examined and condemned, and faith in the saving power of the Lord Jesus Christ in and through amendment of life by obedience to the Commandments in letter and in spirit, was affirmed to be the only ground of salvation: the idea and doctrine that the Church is constituted by authoritative human tradition, or by the private interpretation of certain self-appointed and accepted leaders, was judged to be spurious, and the doctrine was formulated and affirmed that the Church is the organic body of those who believe and receive the Lord in a life of obedience to his truth as given in his Holy Word, especially in its spiritual sense.

These affirmations and others too numerous to mention were made in the works of Emanuel Swedenborg between the years 1747 and 1772; they were made with a directness, clarity, and wealth of statement, unparalleled in religious history; they were made professedly and deliberately in the spiritual light of the Lord's Word; made, so Swedenborg himself declares, under the direct teaching of the Lord Himself as he read the Word.

Whatever may be thought of Swedenborg's claim, either as a seer or as a revelator, the fact of his illumination is well recognized, as is also the illuminating effect of his writings. The testimony on these points is abundant.

It would take us far afield into the realms of theology, philosophy, Biblical exegesis, and universal science, to attempt even a summary of Swedenborg's teachings; but the evidence is complete that these writings have revolutionized the religious thought of large sections of the Christian community; and in particular they have constituted a Church body which, while holding steadfast allegiance to Swedenborg as the specially endowed and commissioned scribe of the new

dispensation, claims to have its existence by virtue of its common acknowledgment of the Lord Jesus Christ as revealed in the spiritual truth of His Word, and as making His Second Coming in such revelation. The body constituted by this common faith is the Lord's New Church, the New Jerusalem descended from God out of heaven. Its faith is derived through the help of Swedenborg's Writings from the indwelling light and spirit of the Lord Himself as we read, understand, and obey His Word.

The New Jerusalem is first of all to the newly opened and enlightened mind the Holy City, the body of doctrine as known in heaven and communicated from heaven to men on earth. The first duty of men therefore is to learn the doctrine as it is given by and through Swedenborg; that is, by reading, study, and understanding of Swedenborg's Writings, and by the use of them as the means of approaching the Lord through His Word.

But the New Church is the Bride, the Lamb's Wife, as well as the Holy City; the system of doctrine about the Lord must find its acceptance and abode and use in Love for the Lord. The New Heaven and the New Earth must take form and reality in new life as well as in new doctrine. The New Jerusalem is indeed at once and forever the Holy City; but within, defined and protected by its walls, are the golden streets, the ways of life founded upon love; and along the streets are the well-ordered homes, the chastened and regulated affections which find their common expression and activity in the ways of divinely ordered love. In the Holy City, there are no rampant individualists, no anarchists, no self-seeking and conflicting classes; but individuals and classes serve with loyal devotion the common interests; in work and in worship they have one common purpose, to live as completely as possible the life which the Lord gives and is. The Life which the Lord is, is a divinely organized whole; and so the life which He gives is organic; and He gives it in organic forms to individuals and to societies of individuals, according to capacity and performance. The New Jerusalem in its descent from heaven to earth takes on a highly organized form in the

social body of men who unite in the common belief of its doctrines, and in the common purpose and effort to live the life they teach. Such is the Lord's New Church upon earth, constituted by common worship, common faith, common life, common acknowledgment of the Lord as He reveals Himself in His Word to be, and common effort in that acknowledgment to live in and from Him.

The New Church is the Lord's peculiar and appropriate domain, His proper empire; the *ecclesia,* the select and chosen social body in which and by which He is acknowledged directly and supremely and solely as Lord and God; it is organized by the common purpose to serve Him alone, and is directed and governed by the common knowledge of the principles of His truth. Its allegiance may be variously hesitant and vacillating; its understanding may be dim and imperfect; its practice may be faulty and halting: but it is genuine in so far as its holds in common the foundation principles of the New Revelation, the real basis of Christianity.

LEWIS F. HITE.

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## THE POINT OF VIEW IN THE STUDY OF THE THEOLOGICAL WORKS: (IV) ADDRESSING LIFE IN THEM AND WITH THEM.

IN past articles in the REVIEW (the January, April, and July issues of this year) we have been overhauling points of view from which the student and preacher may approach and present the Doctrines of the New Church. We have been seeking to exhibit a point of view, which, however manifold it may be, shall facilitate what we are finding no easy task, the proclamation of the truth and way of the Lord in His Second Coming. This demanded point of view we have found much at variance with prevailing points of view; and the first two articles referred to have been criticism, largely, of obtaining outlooks and methods in our work. They disclosed, however, the lines along which the discussion would proceed, once it turned more constructive. In the July article I trust it did so. There we sought to exhibit the point of view which we are

pressing in these editorials, as that point of view delivers us from the subordinationism of Scripture which we practise in our theological thought, and as it serves to put the Word again at the heart of our theological thinking and pulpit proclamation. Now we go on to the enforcement of this same point of view in respect of another prime characteristic of it, that it addresses men's spiritual life both in the study of the Doctrines of the Church and in the use of them. To make plain what I intend by this, I must start far back in my subject.

Essentially, in the conception of us all, what is predicted under the symbol of the New Jerusalem in the Book of Revelation is a deepened, more highly informed spiritual life, is it not? And that spiritual life bestirs the world by channels of influx from new heavens in which it is already gloriously realized. Emerging upon the earth, this deepened spiritual life soon signifies its presence. It makes known, for one thing, its desire to have for its province every human interest and activity. The deepened spiritual life of the Second Coming, with a loftier and more widely regenerating truth reigning in it, is to occupy not just the sacred precincts formerly awarded to religion, but the entire secular realm of the "civil and moral," as the Doctrines inclusively put it. The promised New Church is this penetration of human life by more explicitly and more fully revealed Divine purposes which the Risen Person of the Lord Jesus Christ directly animates. It is the earthward progress of the Lord in His Second Coming. He comes now in the manifestation of Himself, in the succinct phrase of the theological works, as "Divine Natural," or in the seizure for His purposes consciously as never before of all the areas of man's natural existence. The kingdoms of the world are to become His. Essentially the Second Coming and the New Jerusalem descending to earth are this deepened and widened spiritual life, a profounder truth reigning in it and giving it its dimensions, but primarily and never less than a new life and spiritual experience.

If this is the nature of the New Church meant by the New Jerusalem in the Apocalypse, does it indicate anything to us in the study and use of "the Doctrines of the New Church"?

Are they not statements of the truths that inform that life? And are we not to study and use them above all in the recognition of this spiritual life wherever it may appear upon the earth; in heralding it, in cultivating it, in giving it conscious and purposeful development? We would preach then in the due and next enlightenment of that life; administer the Christian sacraments in increase of it; congregate in public worship in thanksgiving for it and in intensification of it. The Doctrines of the New Church in our bearing to them would be what that phrase implies; doctrines with which the deepening spiritual experience of the day is furnished ways of thought, means to self-consciousness, direction for its impulses, and a program for the expression of itself in the individual life and in society. In this point of view the theological works would enable us to a searching ministry to the contemporary struggling spiritual life of men. They would teach us to know the day by them. They would empower us to define and to bring to the Lord's more definitely acknowledged direction the current renovation of Christianity, a renovation which is chaotic in its progress, which gives unnecessary concern to many earnest persons, and which is resisted by the sure conservatism of institution and belief.

Is it in this outlook that ordinarily we study and handle the teachings of the Lord in His Second Coming? We have occasional glimpses of this outlook; and occasionally, as the result of an insight or a sympathy more than of training and deliberation, we occupy it; but for the most part we are now, and have been in the past, quite otherwise addressed to our great cause. In what follows do I mistake our outlook as we find it in the main? Quite controlling in it is the assumption that the world is without that spiritual life which is our concern. It was thus "vastated" in the middle eighteenth century. We took that position then, and have not thought better of it since, for the most part. "Natural goodness" there is; religious experience overlaid and stifled with mistaken teaching; a simple undeveloped Christianity of the heart, surviving theological departure from the mind of Christ: but as for any genuine religious life of the Christian type, that was gone

when the Last Judgment came on, in the light, atheistic, eighteenth century; and until the teachings which focus the advanced light of that Judgment and flash it into the future are accepted, there will be no Christian life of the new type in the world. This seems to me to be the temper and outlook in the main of our pulpit and literature, and has been from the beginning, when, no one of us will deny, there was reason for it. And of course if the world will have no spiritual life of the new Christian type until the doctrines of it are accepted into theology, it becomes the first necessity to this outlook that they shall be advocated and presented and urged upon men for their acceptance. And the emphasis goes on this. There gets separated off from the Second Coming which is a process in the life and thought of the world a theological propaganda; and what is essentially a penetration of the whole natural existence of human society by the spirit and mind of the Risen Christ goes before the public as a church movement. These seem to me to be fair outlines of our inherited and customary procedure, and indications of its effects. In brief, the doctrines must first be launched upon the world; in their wake the life of the Second Coming will follow.

Sometimes it is very difficult to distinguish this attitude from the position of men when they said that the Christian is saved by faith—charity will follow along. And throughout this outlook there is absent any adequate appreciation of the significance of the Last Judgment and of the Second Coming. There is a serene imperviousness to all the fine revelations of an altered spiritual environment in which we now, all of us, live, and out of which stream into the world of our natural consciousness the trends, fresh religious impulses, broad-rayed light, realized so largely and mightily there. The attitude is perilously near disbelief in the spiritual world, in its nearness and potency here, disbelief that the Lord is indeed making His Second Coming. None of that light anywhere which the Doctrine declared would follow the Last Judgment, and by which the "Arcana" itself must be understood; and none of that freedom of search into the facts and truths of the spiritual life anywhere which the Doctrine prophesied? No influence

gained by the new spiritual life in a spiritual-natural universe, the inter-relations in which are all influx and reception of influx? No progress earthward of the new Christian life from its heavens in a spiritual-natural universe where those heavens, big with that life, are close down on the processes of thought and feeling of men here? The spiritual life of the new Christian type might in its beginnings be here. It might be spreading apace, stumble though it might for lack of definition. And we might never correlate our efforts with it, preach no Kingdom that is at hand, but only one to come in a better theological future!

The contrast in these outlooks may be stated briefly. Under the one point of view which has controlled us customarily, we advocate the Doctrines for acceptance which must be accepted before there can be the desired spiritual life. Under the other point of view we are ministering with the Doctrines to men's present spiritual life, inchoate as that may be. The latter is an active ministry to actual spiritual life; the former a propaganda and sure exaltation and undesirable emphasis of theological belief, which is to produce the desired spiritual life.

I am told that this contrast is a false contrast, a forced contrast, a contrast that exists in rhetoric, but not in fact. But the contrast is not, as these critics seem to think it is, between doctrine and life. It it between two ways of handling and understanding doctrine. I am sure that there can be these two things: a ministry in which the aim is the winning of minds to certain doctrines,—rather academic labor, commanding inevitably a small audience; and a ministry in which one employs one's doctrine in the promotion of the spiritual life of one's fellows,—a ministry to the life of many. These are different ministries, and they do stand in contrast; examples of both can be found in our practice, though I am sure that the bulk of our practice is of the academic or theological ministry. There is such a thing as giving truth a backward reference to doctrinal grasp of it, instead of a reference really progressive to the life in which it can be taken up. How much standing still must we do before we are warned of Lot's wife?

Still another objection which is made to the drawing of such a contrast in outlooks is this: in emphasizing the need of directing our use of doctrine to the actual promotion of a spiritual life in some measure already present, and in decrying the presentation of doctrine without such ministering purpose uppermost, or in and for itself, we are belittling the importance of doctrine, and discouraging the study of it. Only in the opinion of one who makes doctrine, correct explanation, true theology the supreme matter. To minister to the germinal spiritual life to its due unfoldment with all the power of one's doctrine well-handled, requires as a matter of fact, I submit, far harder and more meaningful study of the Doctrines than to state them passably well and present them to a hearing. To use them with skill and insight in the promotion of spiritual life requires the intensest kind of interpretative study of the Doctrines. You have to know much more than the Doctrines, and you have to know them much better.

The attitude then in which the advocated point of view would set a man in the study and use of the Doctrines is this. It would lead him to address men's spiritual life in and with his doctrine. He would no longer have for his top-most effort just to present his doctrine, and gain conviction of it; he would be employing it in every ministry to the spiritual life, not only in winning conviction of it, but conviction of wrong-doing, the purpose to live spiritually, insight into the regenerate life. With his doctrine he would find his hearer in the latter's religious life, touch his spiritual experience, excite his conscientious powers, impel and guide to a next step in the way. He would want to *employ* his doctrine, not just present it. He would sink it in ministry, not display it in the advocacy of it, for any even its best qualities. His main and only inclusive purpose with it would be to utilize it in the stimulation of men's spiritual life. His job does not end with teaching truth, but goes on to leading into the good of life, as the eminently practical little handbook of religion called "The Doctrine of Charity" says. I know that this hits hard at the "distinctiveness" which some crave for us, a distinctiveness which consists in the possession and insistence upon a different doctrine

and a better; but truly the only enviable distinction and the only right distinction we need seek is, with our doctrine to do more for men's spiritual life than others can do with their doctrine.

Certainly the preacher's approach, as distinguished from the teacher's, goes something as follows. In the breast of every man move instincts, impressed on his mind are "first truths," imbedded in his spiritual structure is a conscience, developed in his growth is a division of self into higher and lower nature, to all of which the preacher just naturally addresses himself. The more he can know of these high things the better, but he does not want so much to convey his knowledge as to use it. What he wants to do is to employ with the utmost skill and feeling, in love of the human being, the most efficacious doctrine he can in the education of the life he finds in the man. He finds that spiritual life in the man in its rudiments, of course, in its possibilities, in its small beginnings; but it is there. He is not going to put it there with any the best doctrine of it. He does not need to implant it; One there is Who does that, and in every man. But under the Lord he wants to be an educator of it. What a difference in two ministries in which one or the other aim is the main aim! Here is a pulpit teacher, whose conception of his work is the conveying to his hearers of the best possible notion of the teaching he is putting forward. He is dilating on the doctrine, unique with his theology, of "remains," the secret beginnings of the spiritual life which the great Sower manages to implant in the plastic childhood and ideal-loving youth of us all. And he succeeds admirably, this teacher, in telling his hearers of this gracious activity of the Lord, and of its tremendous bearing upon the later entrance of the man on the Kingdom. They know this fine teaching now, and they prize it, and they congratulate themselves on it. They want others to hear it. Meantime here a preacher rises, with as good a knowledge of the same truth, who never says a word about it, today anyway, but with a fine fire and a searching tenderness and hopeful vision arouses in his hearers what the Lord once put there, restores to influence what has been discouraged, inspires the

man to identify himself with what the Lord has planted in him, expands into a spiritual character the little seed of it that the warm rain of his speech reaches. The one puts forth a doctrine, in the conviction that if it is entertained good will come of it. The other finds a life present, already there, needing detection, perhaps, certainly encouragement, and he gives it the needed and studied and skilled help with which his doctrine enables him. Such is the preacher's outlook, as he contemplates the individual life in his ministry.

What outlook is true of the individual religious experience, will be true also of the world's religious experience, made up as this is of myriad instances of the former. In the case of the individual religious life we find the life nascent, and with religious doctrine are enabled to identify it, arouse it, give it self-knowledge, and the ability to express itself in action. In the case of the world's spiritual life, the situation must call for the same procedure. The general religious impulse is there, of course, and the historical religious development in some manifestation. And the spiritual life of the new Christian type will be present in germ, if it is to be at all. It will not arrive as an after-result of the extension of a knowledge of the doctrines of it, but from its own springs in the world of the spirit. It antedates the doctrinal knowledge of it, or we should not know what the doctrine is all about. It recognizes itself for what it is in the doctrine, and it seizes upon the doctrine as means to its self-development. But it precedes. We have insisted that knowledge of it must precede it, when we should have said only that knowledge of it must precede the whole development of it, as it is the means thereto; it must be had for the spiritual life to be developed, but not for the spiritual life in its beginnings to be. If the "new heavens" of our Doctrines mean anything, or the Last Judgment, or the inseparability of spiritual and natural worlds and the sure effect in this of changes in that, then the spiritual life, deeper, more highly informed, tending to complete seizure in God's behalf of the activities of mankind, stirs the world at the moment it is at all. Proclamation of the reality and character

of it attends it to herald it, to foster it, to bring it into full being.

The history of Swedenborg's own arrival at the Doctrines of the New Church is a plain enforcement of this fact. He came into the regenerating experiences of the marvellous years 1743-4 of his life with all his traditional Lutheran thought quite intact. As his intromission into the world of the spiritual life as it actually was which antiquated for him came in time under his wholly awakened observation. It was the spiritual life as it actually was which antiquated for him his traditional ideas and much traditional theology. These were not true to that life, nor had they any capacity for ministering to it. Observing that life in its own expressive world, and then the spiritual life of the new Christian type as it gradually formed heavens and a place for itself, he entered into the truths of it, and stated them in systematic doctrinal exposition. Which was the product of the other? The life of men had deepened and grown richer in the nearer presence of the Lord of it; and altering the spiritual world profoundly, amid glorifications it made its way to the gates of our own natural existence. Swedenborg came saying so in volume on volume. That life is present, for us by our doctrine to identify it, herald it for the thing it is, give it the understanding which it must have of itself for it to grow, ascribe it to its Source and Master, and in it proclaim the Second Coming.

Here again I must meet a familiar criticism. That criticism is, that then the New Church is everywhere,—"hanging from every tree," as one of our ministers has put it; it is vaguely omnipresent, suspended in the atmosphere. Not at all. No more than in the individual's life his germinal spiritual instincts and scruples, innate truths and half-formed convictions, or even an occasional whole conviction, are regnant in all his life and in full realization; yet they are a present spiritual experience, which calls for education. If we observe the man, we can be specific in saying what his present spiritual life is; we can be as specific with regard to the world's spiritual life, if we observe it. We have, however, to put ourselves in

the way to observe it. We are hindered from a due observation of it by some assumptions of ours, and even disinclined to consider such a procedure as legitimate; have the Doctrines not delivered themselves in the matter of the world's spiritual condition? But of this assumption, that the world can not have any spiritual life now as it did not when the Doctrines were published, we shall have to keep ourselves free. We need really to study our contemporary religious and theological world with thoroughness and open-mindedness; always in the light, of course, of what we take for spiritual life of the new Christian type. Again, we need to be modest in our expectations; our own achievement of the new life is extremely modest, is it not? It is a dawn we are to make out on the horizon; not the blaze of full day that we are to look for. That is, we need to appreciate new tendency, detect the truths which are still in the shaping, appreciate deepening motive and changing spirit, and every movement of spiritual life; where, ordinarily, we are disposed to tell ourselves that only one thing will content us, and that is, the wholesale adoption of a new theology out of the Doctrines of the New Church,—an act that could be nothing but superficial, and an official arrangement, and no process of growing into the significance of these truths, a process which is going on. And in order to be good observers we need to do one other thing; we need to be able to recognize this spiritual life whatever language it speaks or reveals itself in. Remember *it* is not a theology. Because you find none of your theology proclaimed by it, do not turn from it as by no chance the spiritual life of the Second Coming. There are modes of religious thought, there are motives of religious life, there are regenerating demands made by the fresh religious impulse of the day, which are not of the old order of Christian teaching, but of the new as the latter is indicated to us in the Doctrines of a New Church. And these are to be found, let it be emphasized, in the refashioning religious thought and life about us. I am not one of those sign-mongerers who can find signs of the Second Coming everywhere but in the religious world, where naturally it would be chiefly and directly evidenced. These minds keep

dwelling upon the French and American Revolutions as effects of the Last Judgment and the greater freedom which that event led men's spirits into; but they seem to be ignorant of the revolution in religious thought and temper which has been constant ever since that event: for the reason, often, of course, that little knowledge of history is needed to know of such outstanding events as those revolutions were, while to know anything material about the religious revolution means a wide survey and industrious observation and historical sense and feeling, as well as a steady beam of light, in which to examine a chaotic and prejudice-tossed spiritual change. But the really significant changes in the religious world are so significant when one comes on them and realizes the far-reaching power and influence of them! We cannot enumerate many of them here. But among the most conspicuous are: the spirit of inquiry in religious thought (a small response on the part of the world to "Nunc licet"); the insistence that religion is of the life, not in the hackneyed and immaterial sense that it ought to have an effect in conduct, such as piety and prayerfulness and the conventional respectabilities of religion, but in the sense that the spiritual life has for its domain all the civil and moral life of men; a discernment of the spirituality of the Word; the spirituality of conceptions of the spiritual world, which make our own often materialistic conceptions of it fall flat and repel when we present them; the actual regard to the spirit and mind of Christ in more affairs of individual and society than ever before—He reigns (or shall we think that He reigns only when a certain opinion is entertained of His Person?); an increasing regard for the larger neighbor with a spirit and sanction in it which are from Christ; the growing appreciation that history has a social goal, and Christianity a social Gospel; the aspiration after that larger human society or *Maximus Homo* in which the Divine life will be at all broadly approached by mankind as a whole; the related espousal of Christian standards of international life, and the utter self-sacrifice to which that espousal determines thousands of men; appreciation of the spiritual nature, to step into another region of change, and causative process of crea-

tion; the growing conviction that in the great world of the spirit there must be a middle realm where character is still indeterminate and only gradually wins to evil or good consistency—so many are hurled into that world today before they have made their way to any spiritual purpose; many a growing piece of theological reconstruction which comes straight from Scriptures vastly better known today than ever and spiritually apprehended, and which goes straight to the spiritual life; these and many more evidences there are in just the Christian world of a profound change, a change so decisive and progressive that without any thesis to that effect many beholders of it and especially participants in it speak of it as God's nearer presence and the Lord's own coming. To see these agitations, these strides onward, these departures from the old where it falls short of helpfulness and truth and to see in them the Lord leading men out into a truer and larger Christian life is not to see them as the whole Second Coming; but not to see them at all or to miss their promise is to be peculiarly blind in a light of which we boast nevertheless. There are plenty of shortcomings to see in this same light, and in respect of them we could be specific similarly. But "Watch" is no abrogated bidding of the Lord's anent the Second Coming; we are still under the necessity, after we know that He is coming again, of recognizing His progress with the spirits of men, and of appreciating His working upon their hearts and minds. Surely the Lord has not abandoned all His other and profounder means in that mass of hidden channels which we call influx, and in the direct modification of the affections of men, to do this great work of the renovation of men's spiritual life just by the extension of externally reached doctrinal knowledge. The latter is the mediate procedure by which Swedenborg told Dr. Beyer that the Lord would then proceed to establish a New Church; the former that immediate procedure of which he spoke. A passage I suppose we might do very well indeed to consider for the comment it holds upon our own doctrinalistic attitude and method is tucked away in "Invitation," at no. 25, where we are told that the vitiation of men's spiritual life in Christendom

has its direct and efficacious remedy in these processes of judgment and enlightenment, and but an external remedy in doctrinal revision—something that one would think would be out-and-out plain to all.

Embraced in the point of view then which is being urged in these papers for the study and employment of the Doctrines of the New Church, is the position that in individual and in society that spiritual life stirs which we are meant to lead out by our doctrine—the finest exegesis there is! In temper, in outlook, in its thinking and in the way in which it bears itself to society at large, this life, however inchoate, is unlike what has been, destined to be spiritually deeper, and more highly informed in the mind and spirit of the Lord. It is of a new type. This at bottom is why old teachings which do not promote but rather retard it, are going by the board. It is no more man's creation, either, than any other good thing; it has to be assigned to the source of all things good; it is an effect, however slight so far, of the Lord's nearer presence and stronger impulsion of man in His Second Coming. And with this position embraced in it, the point of view advocated would address the student and preacher of doctrine to this germinal life, bidding him preach to that life, guide it, bring it to self-conscious development, and to the acknowledgment of its origin, *with* his doctrine. Do not preach the Doctrines in no reference to it, in no promotion of it, even in derision and disabling ignorance of it. Utilize them in the service of it. Preach not that Christ *will* reign if you adopt this theology, but what the Apostles themselves above preached, "The Lord Jesus Christ reigneth." The spiritual life of the Second Coming makes its way in the realms of the civil and moral life, and in all the natural activities of men, and is not accomplished, though it will be powerfully aided and brought to full and firm flower, by the actual acceptance in current thinking and in the solving of current problems of human life of the doctrines of the new life. The point of view advocated would take us out to address life-needs, which belong to many, and not just theological questions, which few propound in the technical way in which we seek to answer. How we need this altered

address to our work especially in missions! But where can that attitude not be introduced, if we will, to the speeding of our work, in which traditionally the conspicuous and uppermost effort has been to cry a correct theology?

But this brings us to the consideration, in conclusion, of a reflection which is bound to attend any advocacy of such a point of view in our work. That is, that that point of view is not acquired by deciding simply to take it. To do what is pictured in the casting of the net from the ship's other side, is not so easy as to haul a net up and drop it from the other side of a ship. We do not as readily shift our whole pulpit and missionary method and outlook. There must be an obvious and exacting training for it. If one's training demands the doctrinal over-emphasis, one can but slowly emancipate one's work from it. If the whole of our business, moreover, is to agitate the doctrines, and in class and in pulpit to present them and make them known, then there is a fairly easy training for us to undergo. We must know them in point of the statement of them, and drill ourselves in clear presentation of them. We need to know the larger differences between them and competing doctrines (usually in our training these have been eighteenth century doctrines as a matter of fact). But if our labor is not that of an impossibly extended theological school of a very restricted sort, but the labor of the Church of the Risen Lord Jesus Christ, Who is in the act of making His Second Coming, then our training must be something other than this; and if our work is to see the life He is inaugurating, to identify it, to arouse it, and with our Doctrine skilfully lay hold on it and bring it to a self-possessed development, in us, in others, then a more exacting as well as different training appears for us to undergo. We shall need to know these Doctrines, but better than we ever did, as the transcript of that spiritual life which is now to become the world's spiritual life. We need to hail the outcropping truths of that life in the religious mind of the time. We need to know wide contemporary developments—what you still hear in a Sunday school in this or that place hardly counts! We need history of men's spiritual life. In my own efforts after such a training for our

men I have become intensely interested in connection with thirteen or fourteen theological courses at the School, not only to get the broad, analyzed Scriptural base under every doctrine taught (to conform to the point made in the July REVIEW), but to study every doctrine as an account of the spiritual experience. To do this I employ for collateral study journals of religious experience: Bunyan's "Grace Abounding"; Woolman's Journal; St. Augustine's Confessions; those most pertinent records of the spiritual experience of the new Christian type which we have in Swedenborg's own diaries; the eternal phases of the religious experience disclosed in such an autobiographic Scripture as the Psalms. In this study the Doctrines take on their whole meaning and that reference to life which the student needs to practise in studying and using them. The procedure is a slight introduction of clinical method of a pertinent kind. Training, anyway, fashioned with the results thus aimed at in view, will be the stiffest kind of study of the Doctrines. At the same time it will be the study of much else that cannot be ignored, and which will also help to do away with the point of view which is purely doctrinally-minded and either out of touch with present religious life or contemptuous of it.

From Gardner's "Evolution in Christian Doctrine," I culled some time ago a passage which from a more general approach to our whole question will indicate the manner of training we need for the point of view that we urge in these editorials:

> Of course, theoretically the pastor should mediate between theology and life, having a working knowledge of both. Unfortunately, but not altogether unnaturally, the hierarchy is timid. Ordinands are discouraged from learning too much about life, lest they err in strange paths and lose their way. Equally they are discouraged from penetrating far into modern theology, lest they get lost in the fog. They are advised to be content with the official guides to both; and the official guides are somewhat out of date, and in them accuracy and adequacy are apt to be sacrificed to simplicity. The net result is that the average man does not receive much help from the Church in his attempts to get a mental grip of life and death.

WILLIAM F. WUNSCH.

## A NOTABLE CONFERENCE ON THEOLOGICAL EDUCATION.

If denominational barriers are to be kept in stout condition, it would seem that they ought to be maintained most zealously of all at the seminaries which furnish the denominations their ministers. What jealousies there are, ought to run strong at the fountain-heads. Yet at the recent Harvard Conference of Theological Seminaries one of many pleasant features of the meeting was the entire inattention to denominational lines. Just to find the Theological Seminaries of the United States and Canada coming together to discuss problems of theological education, was an enlightening evidence to the public, and to themselves a somewhat astonishing evidence, of the growth in the Christian Church of the recognition that our religious life is one under the one Master of us all. To the readiness for mutual conference there is to be added in evidence of that recognition the friendliness charged with Christian spirit which characterized the conference of three or four days which ensued.

The profitableness of a conference of Baptist Theological Schools, held in the spring, had suggested to some the possibility of a more general conference to include all the seminaries of the United States and Canada. The President of Harvard University issued the invitation to the Conference. Two members of the faculty of Harvard Divinity School undertook the active arrangements for the meetings, devising the program, with a courtesy appreciated by all inviting the delegates, and very hospitably overseeing their attendance upon the meetings and their sojourn in one of Harvard's new Freshman Dormitories. Fifty-three Schools sent delegates, of whom there were a hundred and thirty, among them some of the most distinguished of theological educators. The Schools represented fifteen religious bodies. Our own School at Cambridge was invited to send delegates, and as its delegate the present writer attended most of the sessions of this notable Conference.

The invitation was to a conference upon problems of theo-

logical education arising out of the war. Some of these problems were created by an even greater shortage of men for the ministry than usual, due to the recruiting of young men for service in army and navy; others by the need to meet more efficaciously in our schools the religious problems of the period of reconstruction after the war. Into the latter problems the President of Harvard inducted us at the evening session with which the Conference opened. The former problems were incisively put to the Conference the next morning by the president of the session for that day. At times the discussions seemed to pass beyond the scope thus indicated for them; all the perennial problems of theological education were too much with the members of the Conference not to find their way into the discussions; yet perhaps no discussion after all grew entirely irrelevant to the specific purpose of the Conference, for the war has given the Seminaries, as it has the Church, to see their whole undertaking in a more exacting light. "Causes affecting the number and quality of theological students"; "the measures to be taken by the theological schools to meet the shortage of ministers which will arise after the war"; "the indispensable minimum and the unattainable ideal in theological education"; the adequate training for parish minister, theological professor, social service worker and missionary respectively; the useful employment of the "clinical method," and the proper extension to students of beneficiary aid: these were the topics of the five sessions of the Conference. Out of the discussions of these topics there will come results not definitely arranged for by any action of the Conference, besides the results that were definitely sought by action of the Conference. There will be new recruiting programs and zeal; there will be revisions of their curricula by some Schools, with a view to preparing men more precisely for modern conditions; there will some slight check result upon the lowering of standards of work in the seminaries; especially, as a "finding" below indicates, there will be increased precaution against the loose admission of men into the School during the period of a dearth of applicants; provided for by another "finding," there will be a work of

reclamation done in the training of ex-soldiers for the ministry. In addition a Continuation Committee bids fair to make an institution of the Conference of Theological Schools of the United States and Canada.

The quotation entire here of the "findings" of the Conference will state in the Conference's own words the results it sought to reach by definite action itself:

## IN THE WAR, UNFLAGGING LOYALTY; FOR THE MINISTRY, A STRONGER BREED

*The Findings of the Conference.*

I. The Conference of Theological Schools in the United States and Canada, to the number of fifty-three schools belonging to fifteen churches, assembled in Cambridge, Mass., August 13-16, 1918, at the invitation of Harvard University, to consider the problems of theological education, especially as affected by the war, expresses its loyalty to the Governments of the United States and of the British Empire in the prosecution of the war. It desires to co-operate in every possible way, especially in proclaiming the moral aims of the war and the duty of continuing the struggle until a just and lasting peace for the world shall have been made possible.

II. The Conference recognizes the great and vital importance of the steps which are being taken by the Governments of the United States and Canada to provide vocational training during the war, and especially in the period of demobilization, for men in the national service.

We are in deep sympathy with the proposal that work should be undertaken by the churches, and in their behalf by other recognized religious agencies, for recruiting candidates for the Ministry, and for the provision of training for those men who have intended to become ministers of the gospel. In order that we may be enabled to offer such assistance as lies in our power in promoting this object, this Conference appoints a Continuation Committee, which shall communicate with such organizations as are engaged in this work, and act as a means of communication between them and the theological schools.

The Continuation Committee shall be empowered to call this Conference together again for consultation concerning the work here provided for, or on any other matter which in their judgment renders the co-operation of the theological schools necessary or important.

III. The Conference respectfully appeals to college and university authorities to give guidance to candidates for the Ministry in preparation for their theological studies similar to that now given to students intending to enter other professional schools.

The Conference requests the Continuation Committee to bring this

action in an appropriate manner to the attention of the institutions herein referred to.

IV. The Conference recognizes that after the war there will be many men looking to the Ministry whose experience in the National Service will have given them great advantages of training and character.

It recommends that the theological schools take special measures to meet special cases, but desires to impress both on them and on those responsible for the acceptances of candidates that in the interests of an effective ministry in the generation after the war, great care shall be exercised in maintaining a high standard of qualifications for the Ministry.

V. In view of the many common problems confronting all the seminaries, such as the decrease in the number of candidates for the Ministry, the Continuation Committee is requested to consider the advisability of appointing committees to study and prepare reports upon such subjects, these reports to be either published for general information or presented at a future conference and the said Continuation Committee is authorized to take such action on this matter as may seem to it desirable.

As one stands off and regards the work of the Conference, it becomes apparent that it was a conference upon methods of theological education. How to dispose the modern seminary's curriculum, how to maintain higher standards of work, how to distinguish the needs of men training for the pastorate and men training to teach theological disciplines, how to deal with beneficiary aid, and how to recruit candidates,—the *how* of the work of the seminaries was to the front. Yet there were questions that might have been considered which go to the substance in which these schools are educating men,—such questions as the President of Harvard University sketched at the first meeting of the Conference. The war is compelling a re-ordered Christian thought, according to the observation of the correspondents of religious papers; certainly the reconstruction to ensue after the war will bristle with conscientious issues for which a religious thought of a large social applicability will be requisite. What this re-ordered Christian thought tends to be, and with what better and more largely apprehended truths of Christianity the Church must bear down upon the reconstruction issues,—

whether revelations of the social goal of human life in a larger humanity such as the *Maximus Homo* of the teachings of the New Church, or a more thorough interpretation of the universe as spiritual-natural, or what,—the Conference did not think to say. Yet answers here would seem to indicate precisely the substance of the theological education most to the point now. And a commanding theological substance might leave far less to solve with educational method. On the other hand, this was not a conference of professors of systematic theology only, but of seminary administrators and teachers of all the disciplines, church history, and homiletics, languages and comparative religion; and it was the problems of method or procedure exactly which all these delegates had in common.

An attendant on the meetings of this Conference who was the delegate of a school on the peculiar footing of ours, could not but ask himself questions about the relations of his own school to such a Conference. In the substance of its courses our School differs far more of course from every other school represented than any of them do among themselves.

The help to be derived from such a Conference by our School was very considerable. Here were assembled men of distinguished attainments in their fields, and of far larger educational experience at their schools than we enjoy at ours. Many were specialists in the administration of a seminary; a number, experts in the organization of a school's educational equipment. For our own School, under-organized as it is even for our own needs, not to speak of comparison with what is deemed a "standard seminary," there were many helpful suggestions to glean, and inspirations for heightened standards to carry back.

In the discussions of methods of theological education our School might have a lively share. And in the pursuit of methods common to all, and of some of the work definitely planned by the Conference, the School can take a full part. It will be a recipient of the reports which the Continuation Committee will publish upon matters of theological education; it will profit with the rest from the guidance which the Conference has asked college authorities to give the student who

means to go into the ministry, so that he will be led to take college work with some significance for his later professional training. With the rest our School can enter into the larger measures for recruiting men for the ministry, those recruited being directed to the schools of their choice; and certainly our School will want to do its part towards the education for the ministry of soldiers who, on the cessation of the war or in the event of their disablement for service, express the desire to enter the ministry of the New Church; and overseeing assignations here will be a Committee of the Conference, in touch with the State and other commissions upon the vocational re-employment and training of soldiers.

Is any more intimate participation open to our School in the opportunities and labors of such a Conference? The courtesy shown to all in the Conference, the inclusive amity of its meetings, and the prevailing recognition of the oneness of the spiritual life of us all, certainly would invite to the fullest participation. Is there any hindrance to this in the peculiar footing upon which our School rests; in the divergence of our cause from the cause of these schools generally? The work of our School implies a sharp divergence, or, better, a critical advance, in the course of Christianity. There is possible to men now, we believe, a spiritual life of a new Christian type, ministered to by a spiritual apprehension of the Word, and itself the mode of the Lord's Second Coming among men. Than this conviction there could be no more emphatic, more unmistakable, or more surely effectual distinguishment of our Church and School. That position imports into probably every theological discipline taught in the School a new and different substance. The Word has a deeper, a pervading, spiritual content; Christian theology is re-conformed to the facts of Christian experience; but not only is it cleared of many accretions, it acquires both new range and added substance in the setting which it is given in a philosophy of a spiritual-natural universe; the facts of church history suffer a reinterpretation; church history, systematic theology, and exegesis, all are altered, not in point of proper seminary method, but by the importation of added substance into them. So our School is

*sui generis*. But this should not spell alienation from the general Christian message, or from schools that educate in it, or from those who carry it. While according to our conviction substance is added to the Christian message, there is in the new depth of the message nothing antagonistic to the original message, nothing but what, indeed, is revelatory of it. What is more, it is a revelation of no one but our Lord Jesus Christ; and His the message was then, and is now. And into the fullness of His message He is leading us all. Guiding by His teaching explicitly, He guides every earnest man by His Spirit implicitly. The Spirit of truth is with every forward-pressing Christian agency, importing added substance into the Christian message that it may serve the day. From the attacks upon the literalism of a hundred years ago and less, a Scripture has emerged which is to be spiritually apprehended. A theology is shaping in the reconstruction of Christian thought which above all is kept to the observed facts of religious experience. Upon church history an interpretation goes with slightly increased confidence all the while which puts men now at a new epoch in Christian civilization. And in all the changes the Master Spirit is the God we know in Jesus Christ. His sway sets us all the same general goals. Toward these goals we all can collaborate who seek a spiritual Christianity, desire a spiritually apprehended Word, rejoice in their epoch, and hail the same Master. In such a large collaboration we would all reach to a unity of service in the Kingdom, by the side of which "union meetings" and federations and all other outward co-operation are as evidence to fact, and very meagre evidence.

There is a good report of the Conference in *The Christian Register* of August 22, 1918; and in *The New-Church Messenger* of September 11, 1918, there is an article by the present writer on some ways in which members of the New Church can follow up through our School various suggestions of the Harvard Conference.

William F. Wunsch.

## GENERAL WAR-TIME COMMISSION OF THE CHURCHES.

That the Christian Church in America has been wonderfully awake to its opportunity and remarkably successful in its handling of special war responsibilities was unmistakably demonstrated at the Second Annual Meeting of the General War-Time Commission of the Church, held in Washington, D. C., on Tuesday, September 24th. This Commission was created by the Federal Council of the Churches of Christ in America, and now acts quite independently under the able Presidency of Dr. Robert E. Speer. The Vice-Chairman of the Commission is the Rt. Rev. William Lawrence of Massachusetts. Its able Secretary is the Rev. Dr. William Adams Brown; and his thirty-minute résumé of the year's work, given at the opening of the annual session, was a remarkable chronicle of large achievement. The work was gathered under four headings: the creation of agencies through which the churches could work together in meeting war conditions; direct contributions to the religious life of the men of the Army and Navy; the establishment of a means of re-enforcement of the efforts of the Government to uplift the morale of the Army and the Navy; and the working out of a program in which the churches could approach the new problems and opportunities brought about by the war. Under these general headings the program for the entire annual session fell; and the various reports followed this order.

Bishop William F. McDowell, Methodist, reported for the work of the Commission's special committee in securing, selecting and preparing chaplains for the Army and Navy, outlining the thoroughness of the training in the special School for Chaplains which the Government has established at Camp Zachary Taylor in Kentucky, where about three hundred are in attendance. He made the statement that the War Department now placed as much emphasis upon the importance of the chaplain's work as on any other department, whether equipment, transportation, or supplies. He introduced Third

Assistant Secretary of War Keppel, who spoke warmly of the Department's grateful appreciation of the assistance of this church organization in securing proper chaplains, and in working for the religious and moral welfare of the soldiers. He said, "What the War Department wants for chaplains, is to have the men whom you can't possibly spare at home,—the very best men."

Chaplain J. B. Frazier, who has charge of appointments of all chaplains for the Navy, and Major Axton, Chaplain at one of the most important embarkation camps, spoke vigorously of the quality of men in that branch of the service, and the great value of their work in this as in no preceding war.

An officer in the War Department reported on the Government's work in meeting the problem of social vice and disease among the soldiers, emphasizing three points,—(1) that the moral appeal is the strongest force for reaching the evil, (2) that the social vice reaching back into community conditions is the larger problem of which the soldier's is the smaller, and (3) that after the war there is danger of a slump in interest in this problem and in readiness to combat it. He urged readiness of the church to help in this work, maintaining that it was an opportunity of a thousand years when the age-long vice could be met squarely and combatted with public sentiment assisting. Major Johnson of the War Department reported on actual conditions of disease, and made strong assertion of the singular purity and cleanliness of the American Army in France.

Rev. Charles S. Macfarland, Secretary of the Federal Council of the Churches of Christ in America, and recent Commissioner to France, returned from the battle front, spoke of his findings there, of conversations with Generals Foch, Haig, Petain and Pershing, as well as with many soldiers in the ranks, all bearing evidence of the high moral plane of the army's idealism and purpose. He contrasted the modesty and chaste, manly vigor of the allied generals, with reprehensible characteristics of the leaders of the enemy. General Foch engaged him in conversation for two hours upon religious conditions in America, in which he was deeply inter-

ested, wishing to understand the fine moral character of the troops we are sending from America.

The special treat of the afternoon session was the presence and address of Dr. Arthur F. Guttery, President Elect of the Council of Free Churches of England and Wales, and President of the Primitive Methodist Union of England. He is a speaker of the rarest ability and force; and as he is to speak in many cities of America, he will do much to give us an understanding of England and its psychological development during the war. Among other things he urged the necessity of co-operation on the part of the Christian churches in America, and the removal of denominationalism as a thing of the past. He found among present conditions in France, that any form of denominationalism is now looked upon as an impertinence.

At the evening session of the Commission there were fully fifteen hundred in attendance. The principal speaker of the evening was Rt. Rev. Charles Gore, Bishop of Oxford, personal Pastor of King George, and a member of the House of Lords. He is a man of most simple and democratic ways, and a speaker of quiet directness. Dr. Guttery spoke again upon the real character of democracy, and won his audience. Other speakers were Secretary of the Navy Josephus Daniels, and Rev. Harry B. Fosdick of New York City, who gave a graphic picture of the conditions he had experienced in war-stricken Europe.

The whole meeting of the Commission was such as to inspire renewed confidence in the religious integrity of America, appreciation of Europe's gratitude to America for moral reinvigoration as well as material assistance, consciousness of the necessity of all Christian churches stirring their best forces to the present problem of spiritual uplift on a large scale and to the preparation for after-war problems of social life here, and conviction of the decadence of all forms of denominationalism. The spirit of brotherly co-operation shown by the exceptionally able men who constitute the Commission, men of many denominations, was genuinely inspiring.

PAUL SPERRY.

# BIBLICAL AND DOCTRINAL STUDIES

## THE LEVITE.

Levi may be said to be a "massive" fact in the Holy Record. No other picture is drawn with such mass-lines. The emphatic way in which he is selected to be a substitute for all the first-born of Israel, and the dramatic reason given for that fact, in the "slaughter of all the firstborn of Egypt and the preservation of all the firstborn of Israel," introduces the "Levite" in a manner not used for any other factor in Scripture. The vast mass of detail given as to his service, his conduct, his life, his family, and his rewards, occupies an entire book to the exclusion of all else—a fact not true of any other figure in the Holy Book. The manner in which the tribe of Joseph is bi-sected, in order that the sons of Israel might still retain the mystic number twelve required by the narrative, is also unique. I have found nothing to resemble it in other sacred books. Even the four-fold incarnation of Vishnu in the Ramayana, as Rama, Bharata, Lakshman and Satrughna, perhaps the most complex situation to which Hindu symbology rises, falls far short in complexity, or rather complex simplicity, of the remarkable type evolved in our Book called after the name of Levi.

And the Levite himself is further dramatically portrayed with the same vigorous and massive lines which paint his origins. The specific charges placed upon him, just what he must carry when the Tabernacle moves, just what he must do when it has been set up, and a mass of other detail, are equalled only by the fierce and relentless way in which his ranks are swept for purifying purposes. It is startling to read the intensity of destruction in the slaying of Nadab and Abihu, the sons of Aaron, who represent what is undesirable in the Levite; and the equal intensity of destructive forces which play through the dramatic epic of the destruction of

Korah, Dathan, and Abiram, who are swallowed up by the earth and swept by fire, with nothing left to tell the tale save their censers, beaten into broad plates to cover the altar. It is evident that the spiritual trait represented by Levi is as prodigiously large as it is vital in the eye of the Divine Author of the Book.

Nor is there any other type so readily read. For evidently again Levi stands for "serving the Lord." That is so plain that he who runs may read. And this "service of the Lord" is difficult of understanding only so long as it is allowed or required to remain in the realm of theological pedantry. As soon as we rationalize service of the Lord by the wonderful sentence, "what ye have done to the least of these, My brethren, ye have done to Me," service of the Lord becomes a most readily understood asset in life. There is a large family of the Levite. There are few human characters in which the "number of the Levite" is not reasonably large. If we understand that the "humanities" are really the Levite in man, and that by reason of his loyalty, his kindliness, his sincerity, his sympathy with human suffering and hardship, he serves the Lord at all times, the entire story of the Levite is readily understood. Taking it for granted that the Tabernacle means the character of man during its formation, and the Temple that same character fully formed, it will be readily seen that the service of the Levite in the uprearing, in the maintenance and in the construction of these "character buildings" is an essential feature. Character is formed much less by what we learn than by what we do. Our sympathies, our loyalties, our friendships, our sacrifices for some one person, for some one country, for some one cause—all these form character in marvelous ways; and the Bible calls that "the service of the Levite."

Even in his undesirable aspects, the Levite presents the same fact. Take the Levite "who passes by on the other side" when the question is one of taking care of him who has fallen into the hands of thieves on the Jericho road. If, for instance, there be those who utilize some great calamity for self and gain, they are certainly Levites who "pass by on the other

side," for they take the side opposite the Divine purpose. Assume, for instance, that some one had appealed to the American people for funds for the Belgians, and instead of sending them abroad, had used them for himself. If such a scoundrel there were, would not his action be based on the fact that he knew that people always respond to such a call. Note that sentence: The people always respond to such a call. Ask any man, ask any woman, to alleviate intense suffering, and there will be immediate response. Thousands of women are knitting throughout the civilized world for soldiers they never knew, will never know, without the slightest thought of reward or even "thank you" at the other end. Try to take the "number" of this army of women, and you will understand the dictate that came to Moses, "Take the number of the sons of Levi!" The psychology of the Bible is most wonderful.

Assume again that there is some one sufficiently base to utilize the fears and superstitions of people for gain. There may be such a one. Say that a husband or wife or child has gone into the dim silence of the future world, and those left behind have superstitious ideas that their departed loved one is in distress, and suppose that some one who has been clothed with the authority of the church promises them amelioration of the conditions beyond for their beloved, if they will pay for such service. If that some one really believes this, and renders that service, he does not fall under this stricture. But if he does not believe it, and takes money for no service actually rendered, or for some perfunctory service, at which he smiles in the privacy of his study,—if such a one there be, can one wonder at the fierceness of the destruction of Nadab and Abihu, the priests, the sons of Aaron? And again, is not this action, good or bad, based on the realization of the fact that men can reckon on this love men have for their beloved dead? It is there, and it is a tremendous factor in the formation of character. It is one of the "number of the sons of Levi."

The Levite represents that side of man's nature, which "serves the Lord." And the "number of the Levite" is a large one.

ADOLPH ROEDER.

## VISIONS OF THE LORD AND THE ANGELS.

TAKING the book of Genesis and the book of Exodus and comparing them for the visions attending their narrative construction, the reader is struck by the fact that, in a general way, the visions of Genesis involve angels only, those of Exodus, the Lord only. A careful survey of the visions of Genesis demonstrates the fact that, throughout, the Lord is mentioned, but not seen: the visions all involve angels in a variety of ways. Abraham sees angels, who, while they are collectively called the Lord, are yet evidently to be thought of as three in number; and they foretell the birth of Isaac under conditions that are miraculous. They also foretell the destruction of Sodom and Gomorrah. An angelic visitant also prevents the sacrifice of Isaac, when Abraham is entirely prepared to surrender him. Lot sees two angels, and they assist him and his family in their flight from the doomed city. Hagar's eyes are opened by an angel, when in her extremity she is perishing with thirst. The life of Isaac is singularly barren of the angelic element of vision or visitation. But Jacob is brought into frequent touch with them, both directly and through his children. He wrestles with the angel at Mahanaim; he sees the vision of the staircase that leads to Heaven, in which case though the presence of the Lord is indicated, it is in so incidental a way as to show that the design is to place the emphasis on the angelic side of the vision. He hears wonderful things in dreams, a faculty which afterward descends to Joseph, whose visions and dreams are familiar to every one.

When we pass on to Exodus, however, the entire structure of the story changes. There is indeed mention made of the Angel of the Lord in the first vision that comes to the eyes of Moses; but the speech that follows is so worded as to involve the idea that it is the Lord Himself who speaks, a phenomenon familiar to those who have read Swedenborg's interpretation of this method of revelation. But everywhere from that point on the presence of the Lord Himself is the centre and core

of the story. The glow of the burning bush seems to grow more and more intense. It is reflected in the bright side of the cloud that stands between Israel and Egypt in the testing-out period; it glows voluminously on Sinai, as the thunders of the Divine Voice reverberate through the heavens, as the "sound of a trumpet growing louder and louder." The light grows more intense; the darkness of the cloud is removed to the outside of the tent, and between the wings of the cherubim over the Mercy Seat, the Divine Presence is pictured as intense light. Note the fact that the evolution of the personality of Deity is left to later pages of the book. The elders ascend the mount and see, as it were, the substance of the firmament under His feet; but it is not until we reach Ezekiel, that an attempt is made to picture the Divine Humanity, presently so startlingly developed in the life of the Christ in the New Testament, and, enhaloed in the original glory of the vision of Ezekiel, in the wonderful picture in the Apocalypse. The careful reader will therefore note that the tendency of the first two books of the Bible is, in Genesis, to picture the presence of Deity as a voice, while emphasizing the angelic side of the Deity, which the Bible purposes to reveal in its complete evolution of the picture; while in Exodus to the voice is added the intense glow of the light. One can almost see the Shechina glowing in the Tabernacle, and its glory reflected in the cloud that covers it.

Wonderful as these facts are in themselves, they grow more so if the Word and the spiritual story it tells be conceived as a coherent narrative, running through the inspired Book from Genesis to Revelation. In this case Genesis would represent the early attitude of the mind on its way toward a perfect apperception and comprehension of Deity. In this stage Deity is really transcendent—or angelic—humanity. The angel, conceived in whatever form may be most readily admissible, is, in every instance, transcendent humanity. He is thoroughly human; in fact, the angelic element is the forerunner of the coming anthropomorphic form to which the mind will finally be admitted. For God as Man is the last and most comprehensive conception of Deity possible to the mind. For this

reason Genesis emphasizes the vision of angels. The next step in the appreciation and comprehension of Deity is the marvel of His glory. The mind is dazzled by the light of Divine Revelation. It is not yet a fully shaped thought of the Divine Humanity; simply of the wondrous glory of the centralized thought. For all the paths of history lead that way; an overwhelming Divine Purpose glows though all its avenues. All the paths of science lead that way; for nature in her creative efforts is too humanly wonderful for words. Take her from the simplest and perfect hexagon of the snowflake, and follow her to the marvel of a solar system, and you will see at the centre the same wondrous light which history sees adown all her avenues. Mathematics puzzle by number, quantity, the infinitude of what is growing larger and larger, the infinity that is growing constantly smaller and smaller, and (in fractions) the infinity that fills the interstices between numbers—all leading the same way: there is infinity and eternity embedded in every avenue that leads inward. So is it with art, with music, with the marvels of the mind, with the cunning of the inventor, with the startling alertness of genius. No matter where the path begins, it ends in God. What more apt picture of this than the glow of the Shechina on the Mercy Seat, radiating out silently into the vast camp of Israel, the spiritual man, reflected in the cloud above the Tabernacle, and under the veil that covers the face of Moses. Never were such strikingly true pictures conceived: no other Book tells such wondrous stories.

ADOLPH ROEDER.

# CURRENT LITERATURE

## A BIBLE COMMENTARY FROM SWEDENBORG'S NOTES.*

On the margin of Swedenborg's copy of Schmidius' Latin Bible are numerous explanatory notes made by Swedenborg. The larger part of this Bible together with the notes was reproduced by photolithography in 1872 under the direction of Dr. R. L. Tafel. The notes thus made accessible have remained undeciphered and untranslated for nearly fifty years. Mr. E. E. Iungerich has now deciphered and translated them, and at the same time has included with them the explanations contained in Swedenborg's Bible Index. The two bodies of notes are here woven together as one commentary, arranged according to the order of the Bible text, and published as one handsome volume. As the marginal notes from the Schmidius Bible are printed in larger type than the material from the Bible Index, the reader can readily see from which source a specific comment has been derived.

The great bulk of Swedenborg's notes on the margin of his Latin Bible was in Genesis, Exodus, and the Prophets. The photo-reproduction for some reason omitted the books of Samuel and Chronicles. Mr. Iungerich has supplied the notes of the omitted parts, the Rev. H. L. Odhner having copied them from the original manuscripts when on a visit to Sweden. As they were originally written in a very small handwriting, sometimes crowded into a very small space, the marginal notes of the photolithograph volume are very difficult to decipher. Mr. Iungerich has given much time and careful study to the work of deciphering them, and as a whole we find his work

**The Schmidius Marginalia, together with the Expository Material of the Index Biblicus.* By EMANUEL SWEDENBORG; compiled and translated by E. E. Iungerich. Bryn Athyn, Pa.: Academy of the New Church. 1917. 631 pp., 8vo. Cloth, $3.00 net.

very accurate, though at times his skill in reading has been put to a very severe test.

The original *Index Biblicus* (Swedenborg's Bible Index) consists of several manuscript volumes, only two of which contain explanations of the text. In the Index as published the passages are arranged under the Latin words explained. To find any particular passage is very difficult, if not practically impossible, as neither Des Guays nor Searle has included the *Index Biblicus* material in his index. Mr. Iungerich has now made all this matter available.

As Mr. Iungerich includes only those passages which Swedenborg explained, a work is still desirable which will include all the passages quoted by Swedenborg in his Index. We understand from Mr. Stroh that not all the *Index Biblicus* was published by Dr. Immanuel Tafel and Mr. Kahl in the four Latin volumes issued by them. When the new phototype volumes are available for use, it is to be hoped that a new and complete edition of the Bible Index may sometime be published, and also an English translation.

We wish to call the attention of ministers and others interested in biblical exposition to this valuable addition to their working tools, which makes readily accessible materials hitherto beyond their reach. The Church is greatly indebted to Mr. Iungerich for this valuable work; and it is to be hoped that New-Churchmen will express their appreciation by a liberal demand for the book.

JOHN WHITEHEAD.

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## "MAN'S SUPREME INHERITANCE."*

THERE is a thesis upon human development in Dr. Alexander's book entitled "Man's Supreme Inheritance" which is a truth susceptible of general application. He himself pursues applications in the realm of man's physical well-being, where

* *Man's Supreme Inheritance:* Conscious Guidance and Control in Relation to Human Evolution in Civilization. By F. MATTHIAS ALEXANDER; with an introductory word by Prof. John Dewey. New York: E. P. Dutton and Co. 1918. 354 pp., 12 mo. $2.00 net.

he marshals the support which his own practice affords his theory.

His thesis is brought to view in his sub-title: "Conscious Guidance and Control in Relation to Human Evolution in Civilization." In our evolution we have run into many maladjustments of our life, retaining as we have the instincts of earlier stages of our life for our guidance in later, more complex stages. The result is that we live under numerous strains and in the midst of inner conflicts; the old guidance does not suffice to bring us into a mastery of our present physical and nervous and moral situation. Only one thing will. To stop short of that one thing is to deal piecemeal and palliatively only with "the crisis in our physical and moral health." And that one complete forward step is to "carry the power of intelligence further" than it has yet been carried, "in making its function one of positive and constructive control" (Introductory Word, p. xv, by Professor John Dewey). The enlargement of the area of conscious control so that natural desires which have suffered a wrong inhibition will enjoy a constructive and right development, and this applied universally to life, not just to an occasional maladjustment, is the principle which Dr. Alexander is putting forward. He stakes a great deal on it. He declares that the failure of subconscious guidance in modern civilization is now being widely admitted, "and the consideration of this fact has led a few to the logical conclusion that conscious guidance and control is the one method of adapting ourselves not only to present conditions but to any possible conditions which may arise" (p. 10). "By the application of this principle of conscious control there may in time be evolved a complete mastery over the body, which will result in the elimination of all physical defects" (p. 56).

Dr. Alexander's own discussion of the applications of this principle are of its applications in fields into which medicine reaches. He considers the place of this principle in the correction of habits of thought and of body, in race culture and the training of children, in the healthier actions of nations, in education, and especially in the re-education of the breathing

function. He adduces cases of his own from a large practice to make plain the processes of conscious guidance and control as they concern the physician. He has much adverse criticism to pass, in the light of the principle, upon many current remedies for physical ailments and upon educational methods, such as "physical culture," deep breathing, and schools for "free expression" of the child-life. Upon much of the technique estimated and advocated here no layman can say much.

But of the principle of conscious guidance and control, which is one of general application in human life, any reader of the book would be more fully persuaded by it, and of the need of such guidance, and the efficacy of it, in the physical life, but in all life, so far as that goes. It is a principle which enlightenment and the extension of man's intellectual powers calls into more and more energetic exercise. There have been a passivity and a willingness to drift and a committal of life to instinct and desire about the procedure of civilization which have probably brought us to the present pass. Action by men as of themselves in the best light they can achieve is a principle at once to be enthroned in as many departments of life as possible. Dr. Alexander has put out a well-supported argument for the enthronement of it in the remedying of physical defect and limitation; and there is an especial appeal in his position to the man who appreciates, as most readers of this REVIEW do, the crying need of the same principle in the religious life of men. With its doctrines about throwing oneself upon a God Who does all for us, its doctrine of man's impotence in spiritual things, its salvation by an imputed merit, Christian thought has left men too passive before moral defect and spiritual shortcoming. The Divine Omnipotence was the principle of every such doctrine, and into it, as Swedenborg said, the whole of the theology current in his day could be resolved. His own accent was upon man's action as of himself in the spiritual life, as in all his life; and his emphasis was upon that human co-operation, consciously rendered, in the intelligent guidance of one's life, without which even God above makes none of that progress with men to which He looks forward.

WILLIAM F. WUNSCH.

## "THE PSYCHOLOGY OF CONVICTION."*

THERE is much solid matter in this book, and an evident familiarity with psychological discussion. The theme is a fundamentally important one both for practical and spiritual life. But the reading is difficult partly from the complexity—not to say remoteness—of the experience which is the subject of description, and partly from the style of the writing. The author's thought is tiresomely discursive, and his sentences are elusive in their lack of organic unity and conclusive directness; and this in spite of the abundant illustrative material brought to mind in his pages.

In consequence of these characteristics of the writing, the baffling complexity of the Psychology of Conviction is greatly exaggerated, and the reader is made to feel that he is barely on the confines of the subject. Nevertheless, the book makes very decidedly the impression that the Psychology of Conviction is a subject of wide and far-reaching importance; and it is fair to say that the treatment is a good indication of the present stage of progress in this branch of psychology.

The method of the book is, first, to state in general terms the psychological elements and forces that enter into the formation of convictions, and then to illustrate the process by considering certain "cases." Among the cases are "The Supernatural," "Democratic Suspicion of Education," "The Psychology of Indulgence: Alcohol and Tobacco," "The Feminine Mind," "Militarism and Pacifism." In each case the attempt is made to analyze and set forth the psychological constitution of the conviction under consideration. In considering "The Will to Believe in the Supernatural," the author makes reference to Swedenborg to illustrate the point that a scientist's eminence in his own specialty cannot be taken to guarantee his personal beliefs in religion or in other directions. The presumption is that the scientist does not in such cases apply

* *The Psychology of Conviction;* A Study of Beliefs and Attitudes. By JOSEPH JASTROW, Professor of Psychology in the University of Wisconsin. Boston: Houghton Mifflin Company. 1918. 387 pp., 8vo. Cloth, $2.50 net.

the methods of his science to the content of his faith; in other words, he keeps his science and his faith in separate compartments of his mind. His reference to Swedenborg in this connection is ill-fitting; for Swedenborg himself and also his followers claim to do just that,—to carry their science, their philosophy, and their common-sense, into their religious convictions; and this is probably the greatest difficulty which the New Church encounters, both in its internal development and in its efforts to bring others to its convictions.

We have read with special interest and care the chapters on "The Psychology of Indulgence" and "The Feminine Mind." It may be said that the discussion is at its best here; but it falls short in thoroughness and in point. Indulgence is treated too much from the point of view of the apologist, and so comes too near being made a virtue. The contrasting and conflicting convictions as to indulgence in alcohol and tobacco are set forth with more detachment than is consistent with a moral point of view and a moral purpose. The moral view, as also the spiritual, is that indulgence in these things is hurtful, and therefore not to be tolerated.

The same lack of moral earnestness is felt in the author's treatment of "The Feminine Mind." There is much valuable psychological material and comment; and the outcome is a significant account of the psychological elements involved in the distinction of sex; but they are not constructively used. Characteristically man is aggressive both mentally and physically; while woman is always "the belle and the matron." On the whole the analysis agrees with Swedenborg's formula, "Man is intellectual and woman affectional." A systematic development of this formula would go far to solve the problem of the relation of the sexes in practical and social life.

Lewis F. Hite.

## "THE CHRISTIAN MINISTRY AND SOCIAL PROBLEMS."*

In the *New-Church League Journal* for November, 1916, appeared the following testimonial from the pen of the Rt. Rev. Charles D. Williams, Episcopal Bishop of Michigan:

> I have been an interested reader of Emanuel Swedenborg's works through my whole life [he was born in 1860], particularly in my early ministry. I have found much illumination and inspiration in that reading. I have also read a great deal of New-Church literature, particularly the writings of Chauncey Giles; in fact, that literature has been in large degree formative of my religious and theological convictions.

That statement is sufficient to arouse a New-Churchman's interest in any publication by this author; an interest that should be heightened too by the author's dedication of the volume before us to one since deceased:

> To Walter Rauschenbusch, a modern prophet of "The Kingdom of God," this little volume is offered as a slight tribute of admiration by one who has found in the writings of that man of God a chief source of inspiration in preaching the Gospel of the Kingdom.

Though the opening words on the fly-leaf of this book read "Church Principles for Lay People," the volume is addressed primarily to clergymen, and its fundamental purpose may be said to be, to make prophets of priests. He would encourage clergymen everywhere to become true leaders of men in the effort to bring in the Kingdom of God on earth in face of all the forces of Mammon within and without the churches. The tone of the little treatise is decidedly temperate, however, for the author recognizes the impracticability of too radical a social message on the part of the average clergyman, and the need of the utmost tact in leading the average "Christian" organization in a way the Lord would approve; for "the attractions and repulsions of the modern church are precisely

**The Christian Ministry and Social Problems.* By CHARLES D. WILLIAMS, Bishop of Michigan. New York: The Macmillan Co. 1917. 133 pp., 12mo. Cloth, $1.00.

the opposite of the attractions and repulsions of Jesus . . . we have largely lost the masses who followed Jesus and won the classes who crucified Him" (p. 60). Surely the minister who would be faithful to his Christ, has no easy task before him!

The five chapters in the little volume deal successively with the following topics: The New Social Conscience; Wealth and Poverty; Charity or Justice; The True Radicalism; Some Practical Agenda. The book abounds in quotable matter, quite acceptable from a New-Church standpoint, that should appeal powerfully to every minister who would be a faithful subordinate officer in the army of the Lord. Let one example suffice:

> When we preach again in some measure as Jesus preached, a mighty force of social dynamic will be set free in our modern world. "The gospel of the Kingdom" will again be proclaimed, and that gospel will inspire anew the attack on ancient tyrannies and oppressions and give tremendous impulse and sustaining power to all movements for industrial freedom, economic democracy and social justice. Then and then only shall we fulfil our complete mission as ambassadors of Christ, interpreters of His message and preachers of His Word. Therefore while we hand over to the experts in the various fields the mechanism of reform, the devising of methods and means, policies and programmes,—let us, as the ministers of religion and the representatives of the Christ, so convict the common conscience of the intolerable sins inherent in the whole unjust system now prevailing and so fire the common heart with the passion for justice and righteousness, that we shall furnish the moral dynamic for every right reform and every noble effort towards the ideal society. Let us leave to reformers the "if and how of the practical reason" while we as prophets of the Most High stress the "must and ought of the categorical imperative." So shall we prove the real radicals in this mighty movement after the pattern and example of our Master, the great radical of all the ages.

We wish that copies of this book might be presented to, and read by, all our ministers,—nay, every minister in the world.

B. A. WHITTEMORE.

## "THE CHALLENGE OF THE PRESENT CRISIS."*

Rev. Harry Emerson Fosdick has long been noted as a preacher for young men; and we consequently expect from him a vitalizing treatment of any subject he chooses to take up. His little volume entitled "The Challenge of the Present Crisis" deals with the most important subject before the world today, and deals with it in a decidedly manly way, it being the outcome of the author's own struggles in facing the spiritually disheartening aspects of the present world-conflict. To the pessimist's cynical fling as to the failure of Christianity to prevent the War, our author has a scathing reply in the thoughts presented in this book. While he does not deal with the underlying spiritual causes that brought on the War, he sees the manhood of the Allies rising to meet the merciless aggressions of autocracy with vicarious self-sacrifice in the upholding of ideals; and in the light of the perspective of history spiritually interpreted, he looks forward to a better world as the outcome of the present conflict. The fact that so much has been said about the failure of Christianity to prevent the War, reveals that there is widespread recognition that Christianity has been at fault in confining its attention exclusively to the salvation of individuals; and this recognition implies that there is to be an inevitable awakening of the Church to her duty of proceeding upon her mission of regenerating collective humanity, and of abolishing war. What a challenge in that! But the War is educating spiritual heroes for leadership in this direction in the years that are to follow. Yes, as our author well says, "Christianity will indeed have failed, if it does not stop war."

When the War has been faced as a challenge, what then? We must in one way or another back the force that is sent to the front to combat the forces of autocracy. How interpret Christianity in a way to justify this? The author has scant patience with the pacifist arguments of the Quakers and

* *The Challenge of the Present Crisis.* By Harry Emerson Fosdick. New York: Association Press. 1918. 105 pp., 12mo. Cloth, 50 cents.

others based upon the "supreme sacredness of personality," etc., because for him the fact of the soul's immortality modifies the force of such arguments radically in the present instance. The "conscientious objector" is for him in final analysis a molly-coddle. He has no doubt that in the present crisis the Lord Jesus Christ would encourage armed resistance to, and warfare against, autocracy. He cautions us, however, against all unchristian feelings in the War; for "we must be as ready to forgive as God."

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